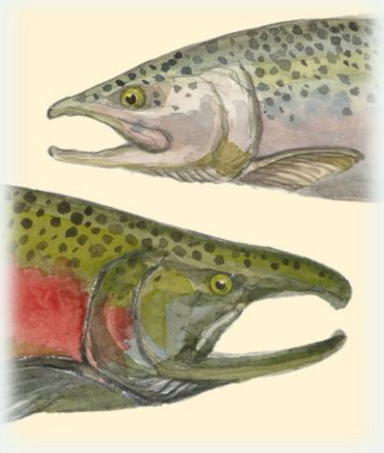
Dry Creek Community Meeting

January 14, 2016

David Manning

Environmental Resources Manager

David.Manning@scwa.ca.gov

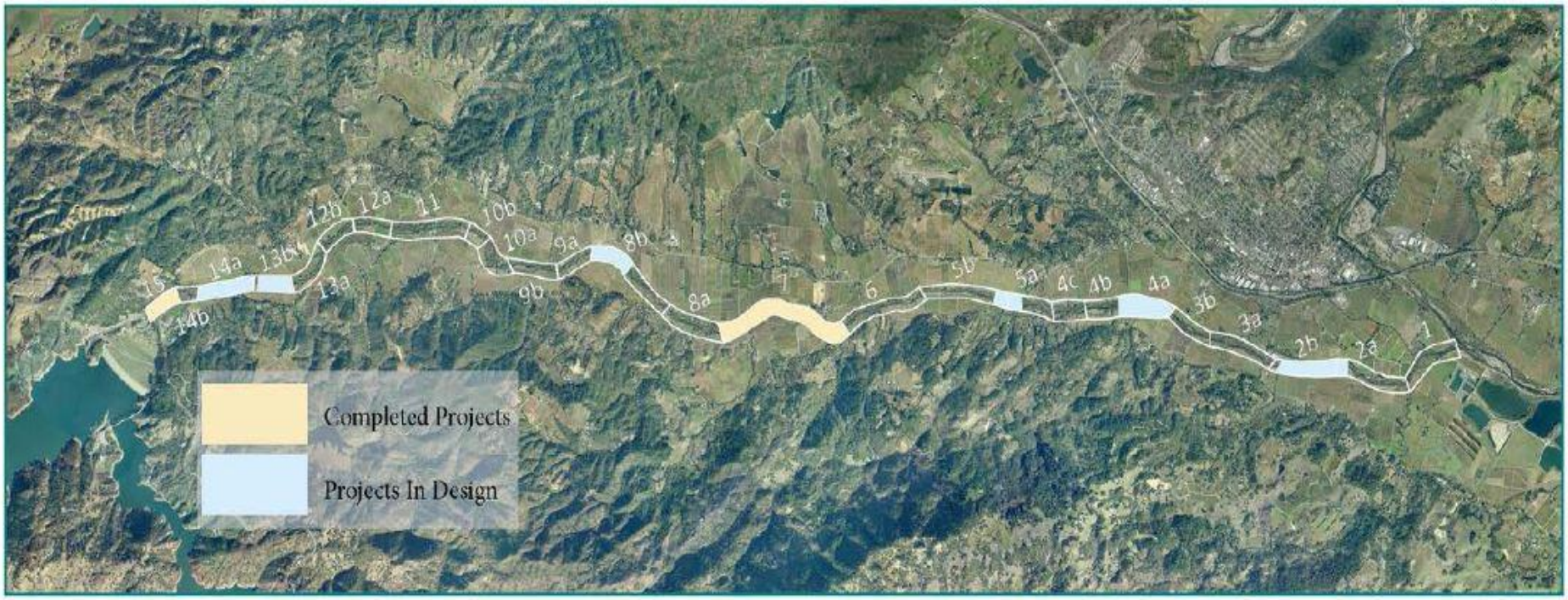


SONOMA COUNTY WATER AGENCY

Dry Creek Community Meeting Agenda

6:00 p.m.	**Welcome** — Supervisor James Gore
6:05 p.m.	**Overview of Dry Creek Habitat Enhancement Project,** David Manning, SCWA
6:10 p.m.	**Dry Creek Then and Now,** Neil Lassettre, SCWA
6:20 p.m.	**Habitat and Fish Monitoring,** Neil Lassettre and Gregg Horton, SCWA
6:30 p.m.	**Status of Miles 2 & 3,** Dave Cuneo & Greg Guensch, SCWA
6:35 p.m.	**Questions & Answers**
6:55 p.m.	**U.S. Army Corps of Engineers Project:** Kelly Janes, USACE
7:05 p.m.	**Future Project Phases: Miles 4-6,** David Manning, SCWA
7:10 p.m.	**Right-of-Way Discussion,** Dan Mason, SCWA
7:15 p.m.	**Safe Harbor Agreement ,** Bob Coey, National Marine Fisheries Service
7:25 p.m.	**Questions & Answers**
7:55 p.m.	**Concluding Remarks**— Supervisor Gore

Project Timeline



Complete design phase, permitting, landowner agreements, begin construction	**Milestone 1** 1 mile of habitat in Dry Creek completed and work on miles 2 & 3 begins	**Milestone 2** Complete Enhancement of miles 2 & 3	**Decision Point** Evaluate success of the enhancement projects	**Milestone 3** Enhance 3 additional miles of habitat in Dry Creek for a total of 6 miles
2012	**2014**	**2017**	**2018**	**2020**

Thank You

Phase I (2012-2014)

Don and Kim Wallace
Peter and Marian Van Alyea
Doug Lipton and Cindy Daniel
Michael and Vicky Farrow
Carole and Geno Mascherini
Ron and Pamela Wollmer

Steven and Sonia Rued
Seghesio – Chen's Vineyard LLC
Thomas Rued
Richard Rued Family Trust
Dry Creek Band of Pomo Indians

Dry Creek Then and Now

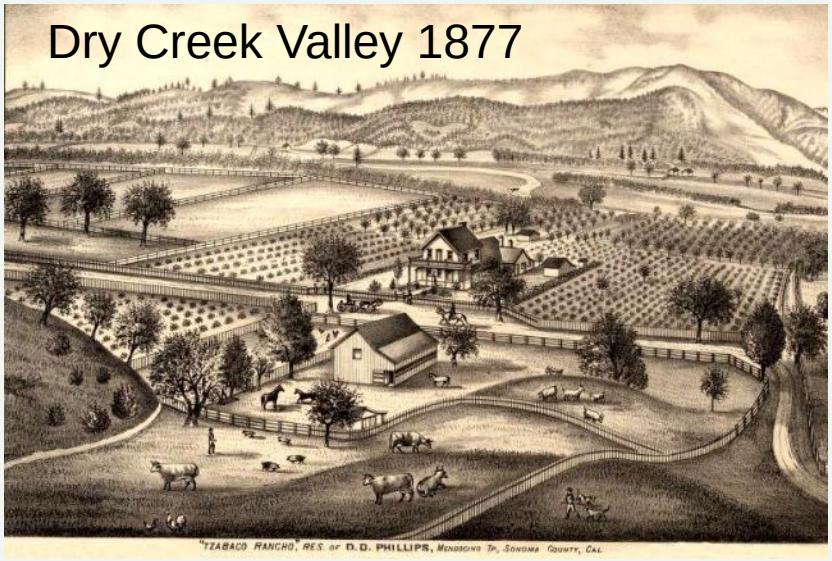
Neil Lassettre, PhD

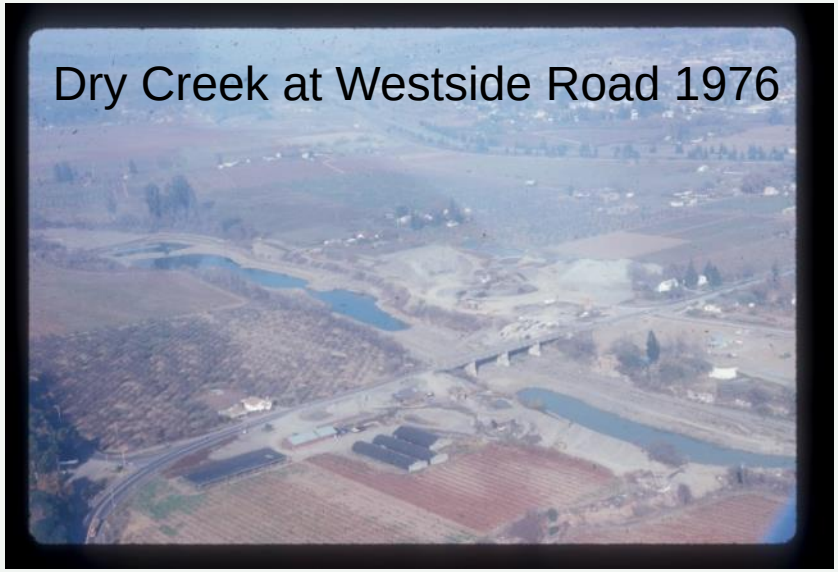
Principal Environmental Specialist

Neil.Lassetre@scwa.ca.gov

SONOMA COUNTY WATER AGENCY

Dry Creek has evolved over the past 150 years





1850 to 1900

- 40% of forest cleared
- Converted to grazing
- Changed runoff and sediment delivery
- Initial aggradation of streambed
- Followed by channel incision

1900-1970s

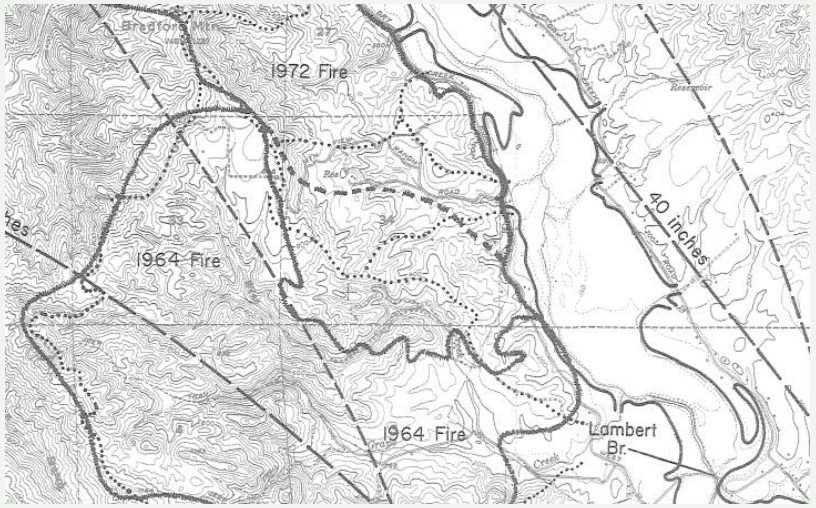
- Gravel mining in Russian River
- Escalated in 1950s & 1960s in Dry Creek
- Lowered stream bed in RR and Dry Creek
- Headward erosion
- Incised channel; steep, unstable banks

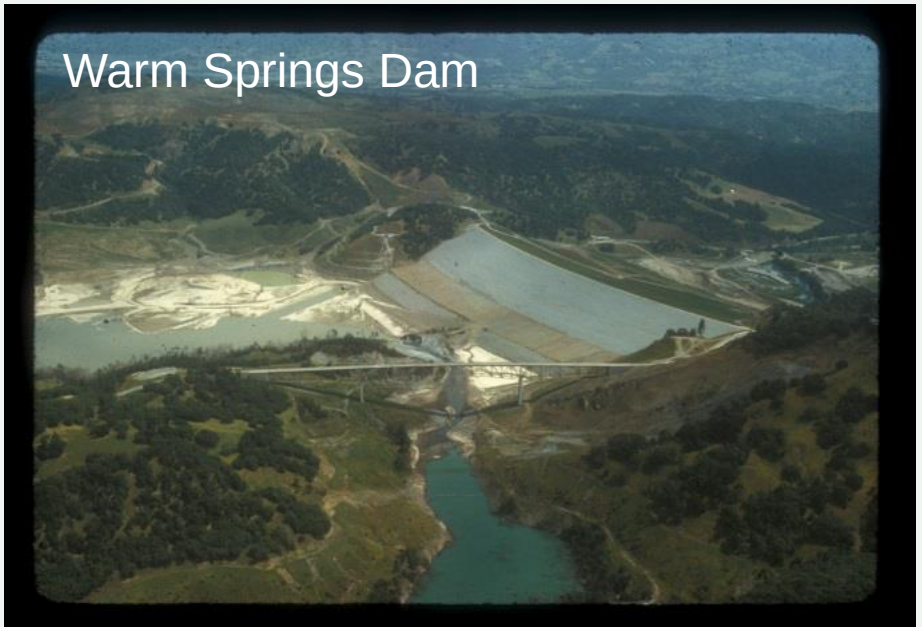
Dry Creek has evolved over the past 150 years

1970s to Present

- Fires
- Flooding
- Warm Springs Dam 1983
- Altered hydrology

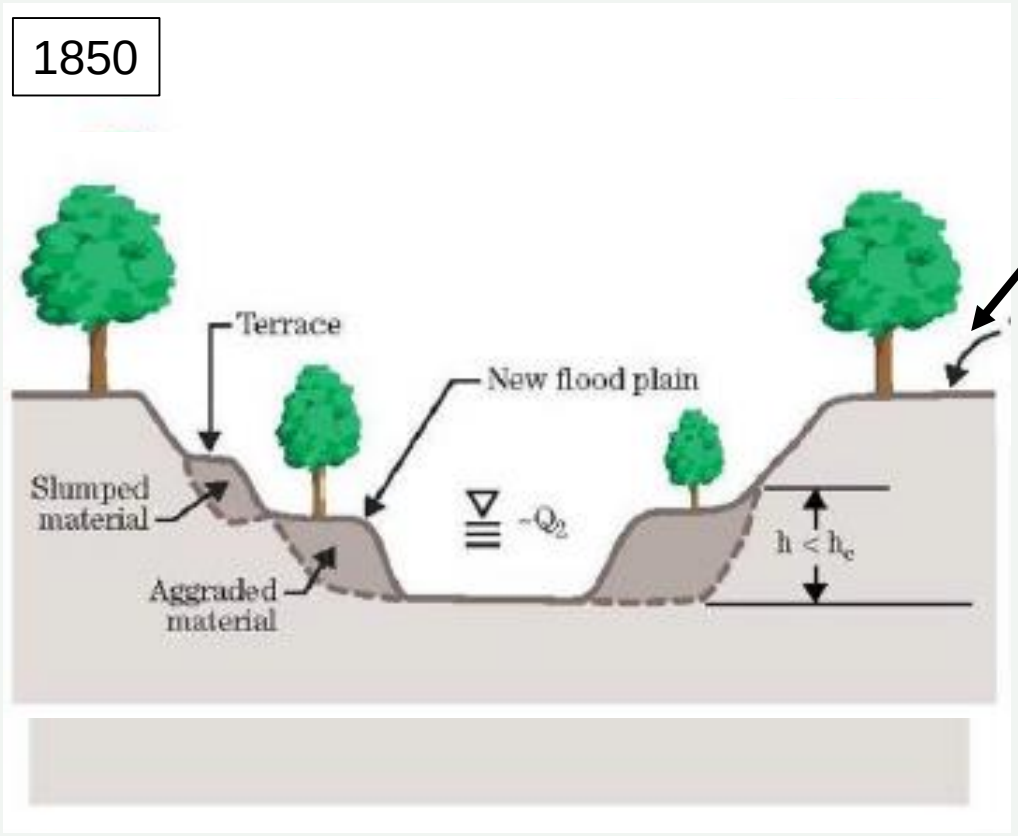
Recent fires



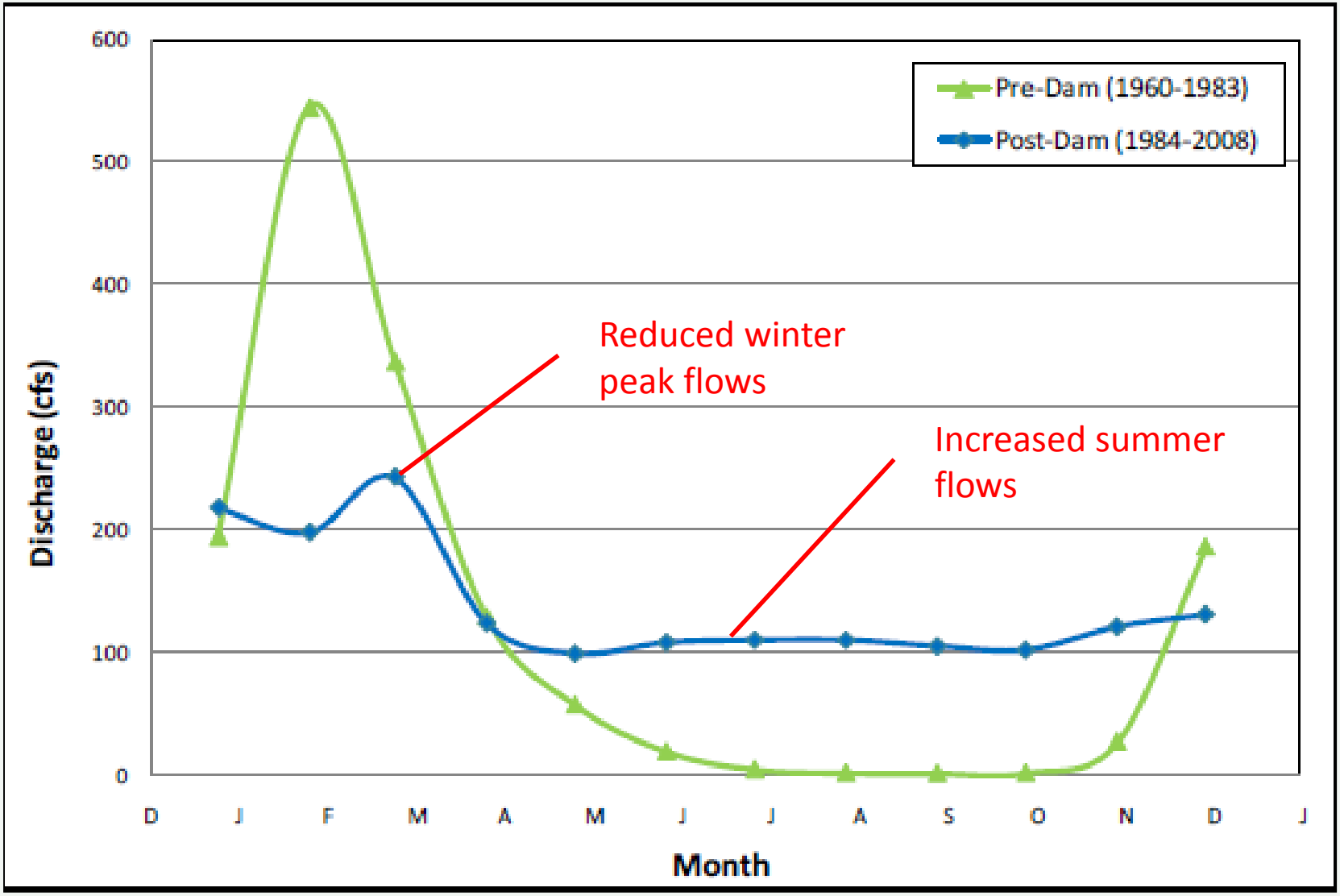


Altered geomorphology of Dry Creek

Aggradation Stabilization



Dam altered hydrology and summer flows



View from Lambert Bridge then and now

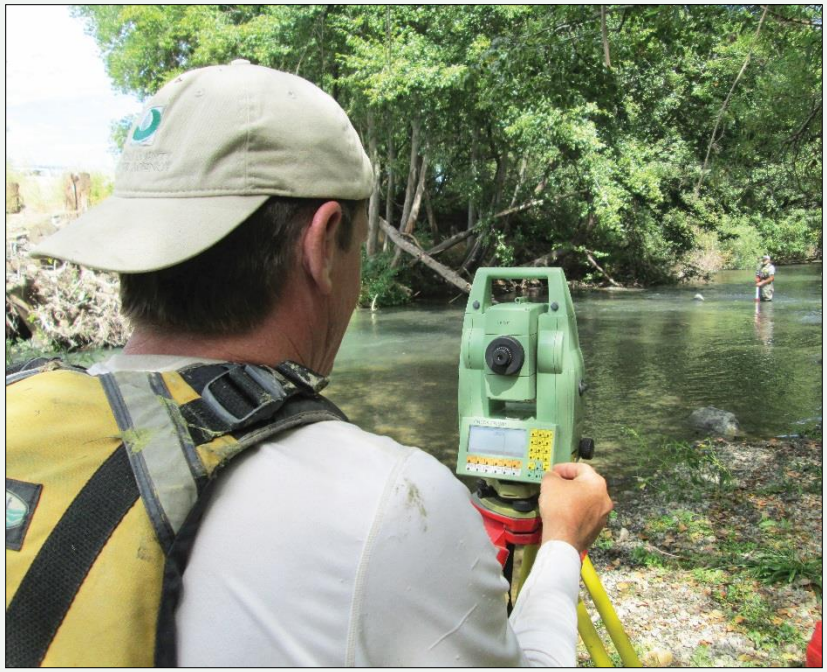
1970

- Higher peak flows
- Lower summer flows
- Limited vegetation encroachment

2010

- Constant summer flows
- Good riparian growth conditions
- Vegetation encroachment

Effectiveness Monitoring



Gregg Horton, PhD

Principal Environmental Specialist

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Neil Lassettre, PhD

Principal Environmental Specialist

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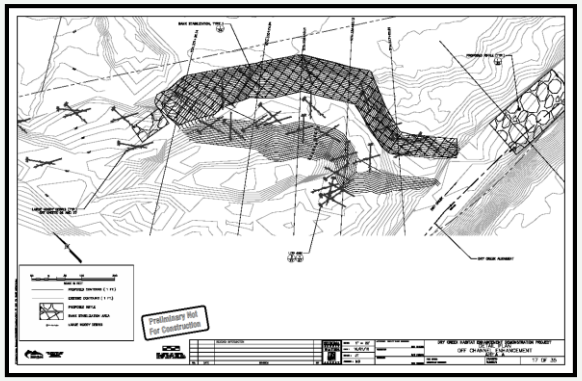
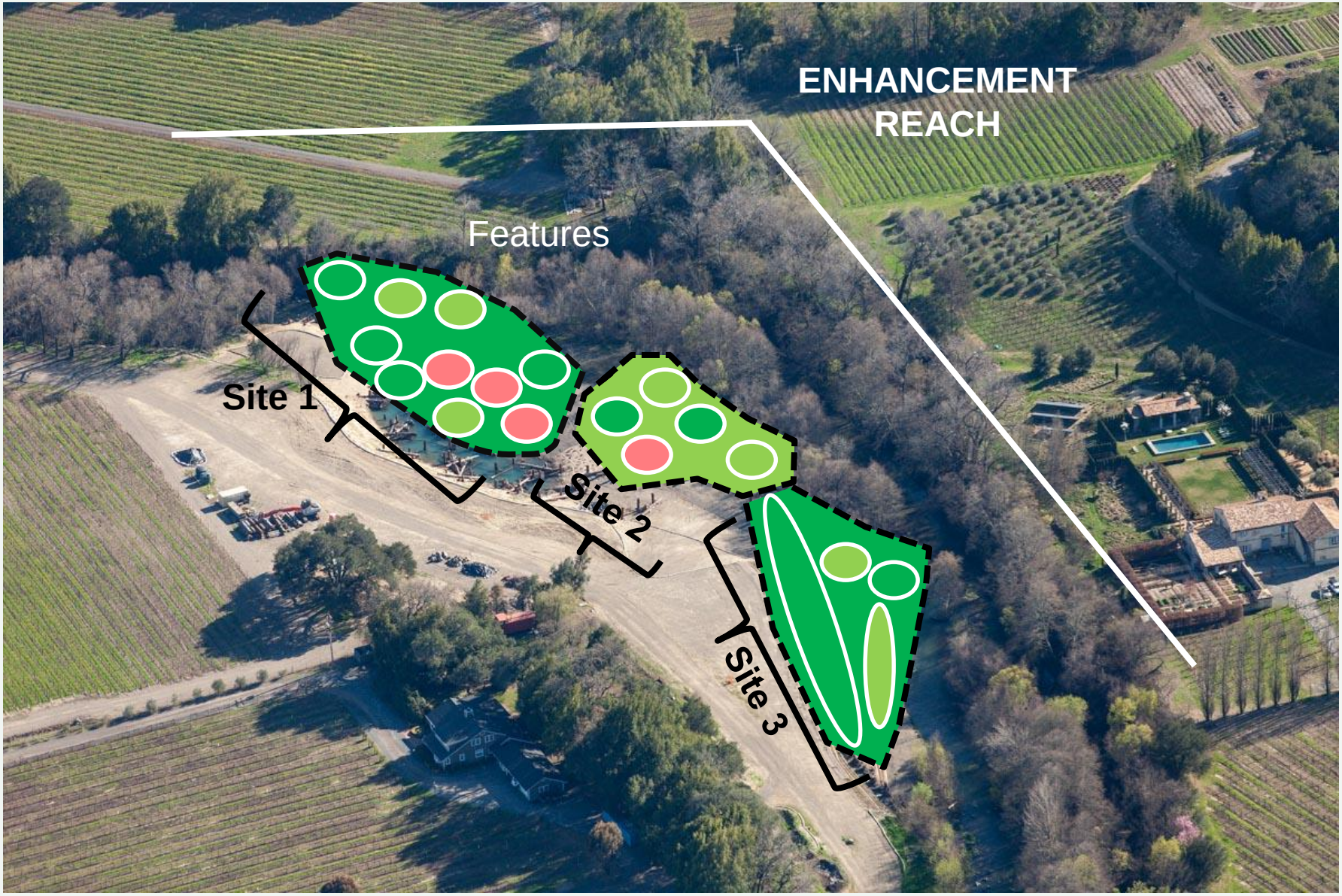
Three Types of Monitoring

- **Implementation (as built)**– Constructed per approved design?

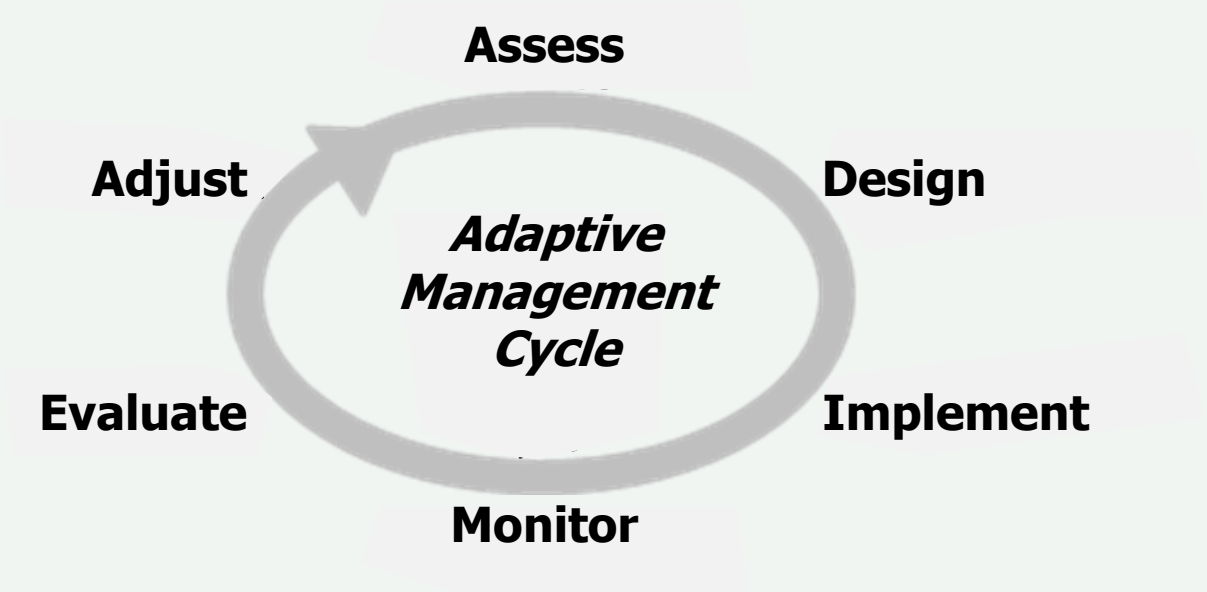


- **Effectiveness (habitat)** – Are desired habitat conditions being created?

- **Validation (biological response)** – Are fish benefiting?


ENHANCEMENT
REACH
Features
Site 1
Site 2
Site 3

Adaptive Management Plan



- Monitoring Schedule
  - Monitoring type (implementation, effectiveness, validation)
  - Year of implementation

Dry Creek Effectiveness Monitoring

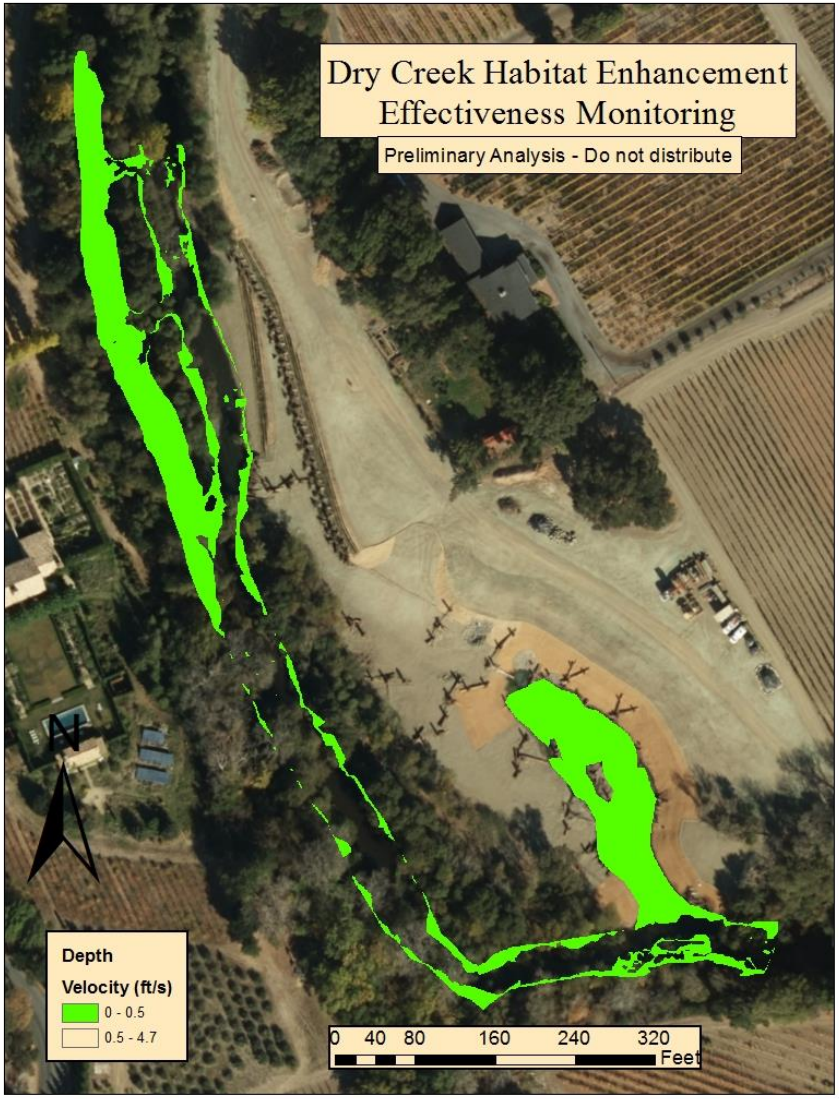
1. Compare to performance metrics
   - Depth: 0.5 – 2.0 ft
   - Velocity: <0.5 ft/s

2. Test design assumptions
   - Design considerations
   - Inform future project phases

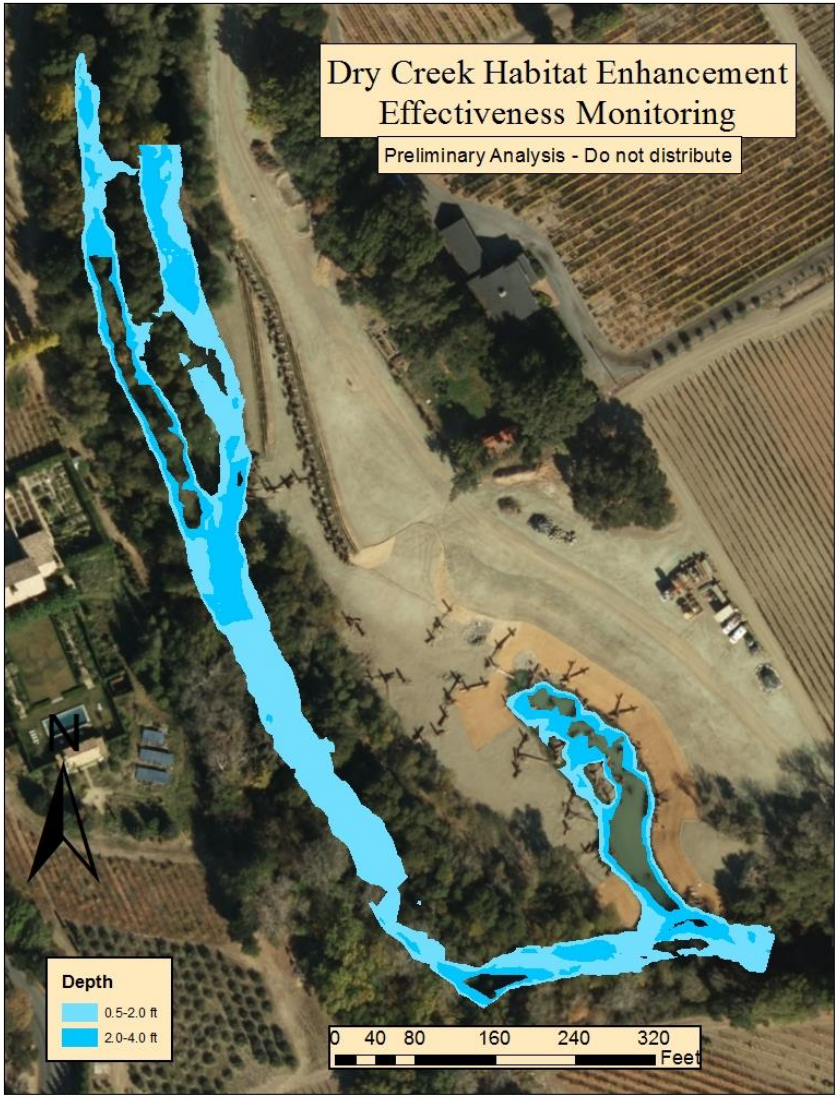
3. Observe change
   - Additional learning opportunity
   - Physical response

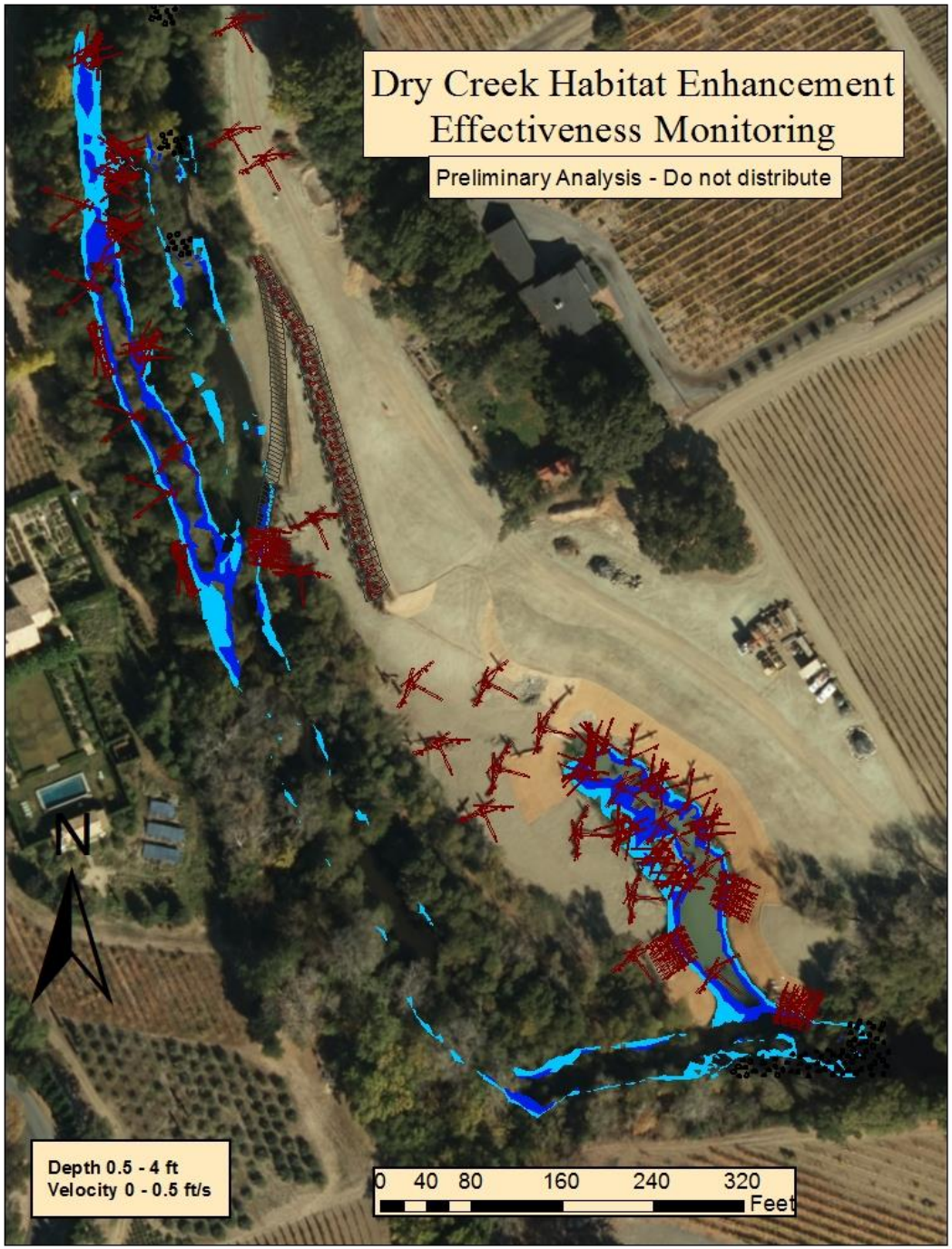

LA
Times

Velocity
<0.5 ft/s

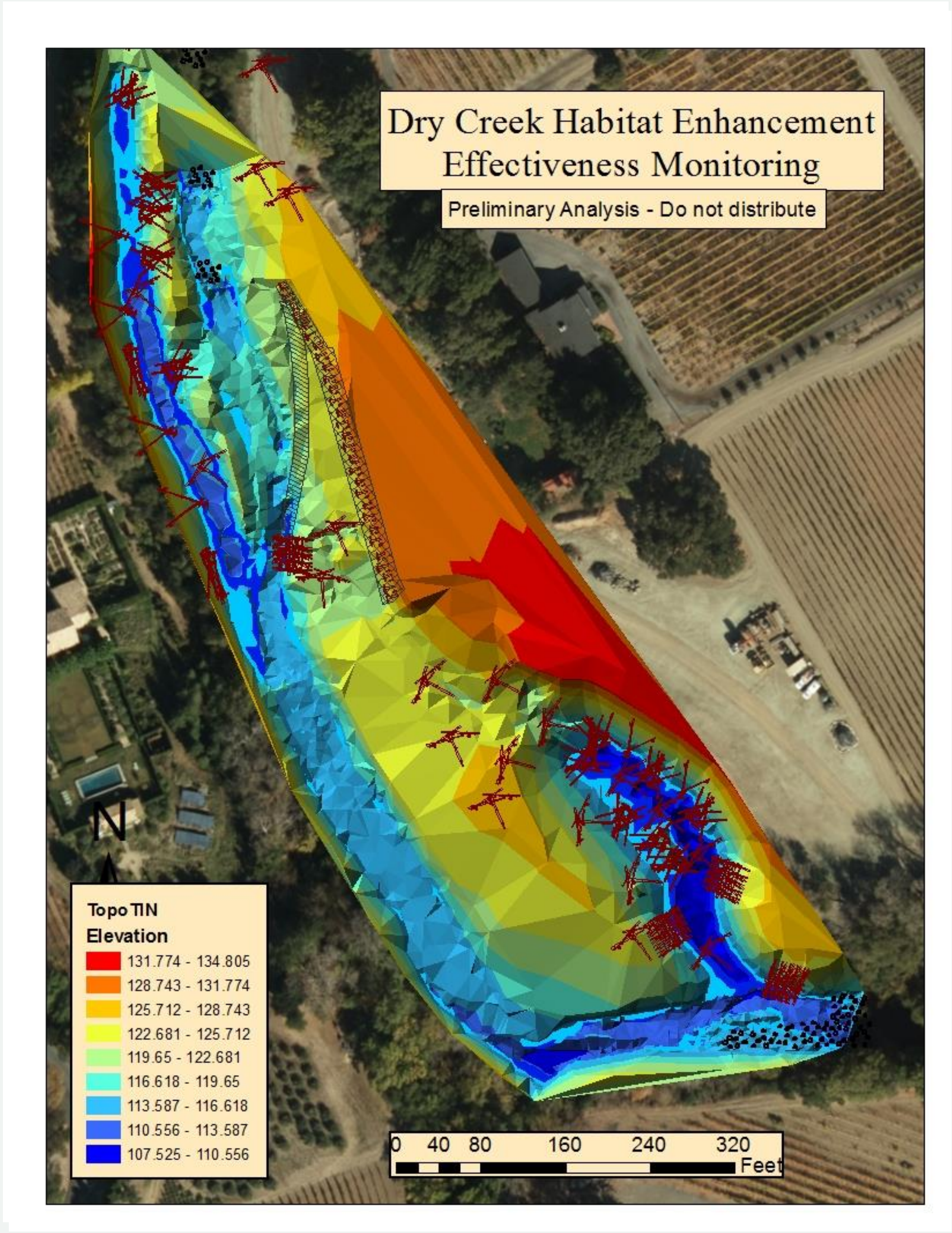


Depth
0.5-4 ft




Dry Creek Habitat Enhancement
Effectiveness Monitoring
Preliminary Analysis - Do not distribute
Depth 0.5 - 4 ft
Velocity 0 - 0.5 ft/s
0 40 80 160 240 320
Feet

Construct digital elevation model of project sites



Juvenile Coho Salmon Focus

Fish Monitoring

Primary metrics

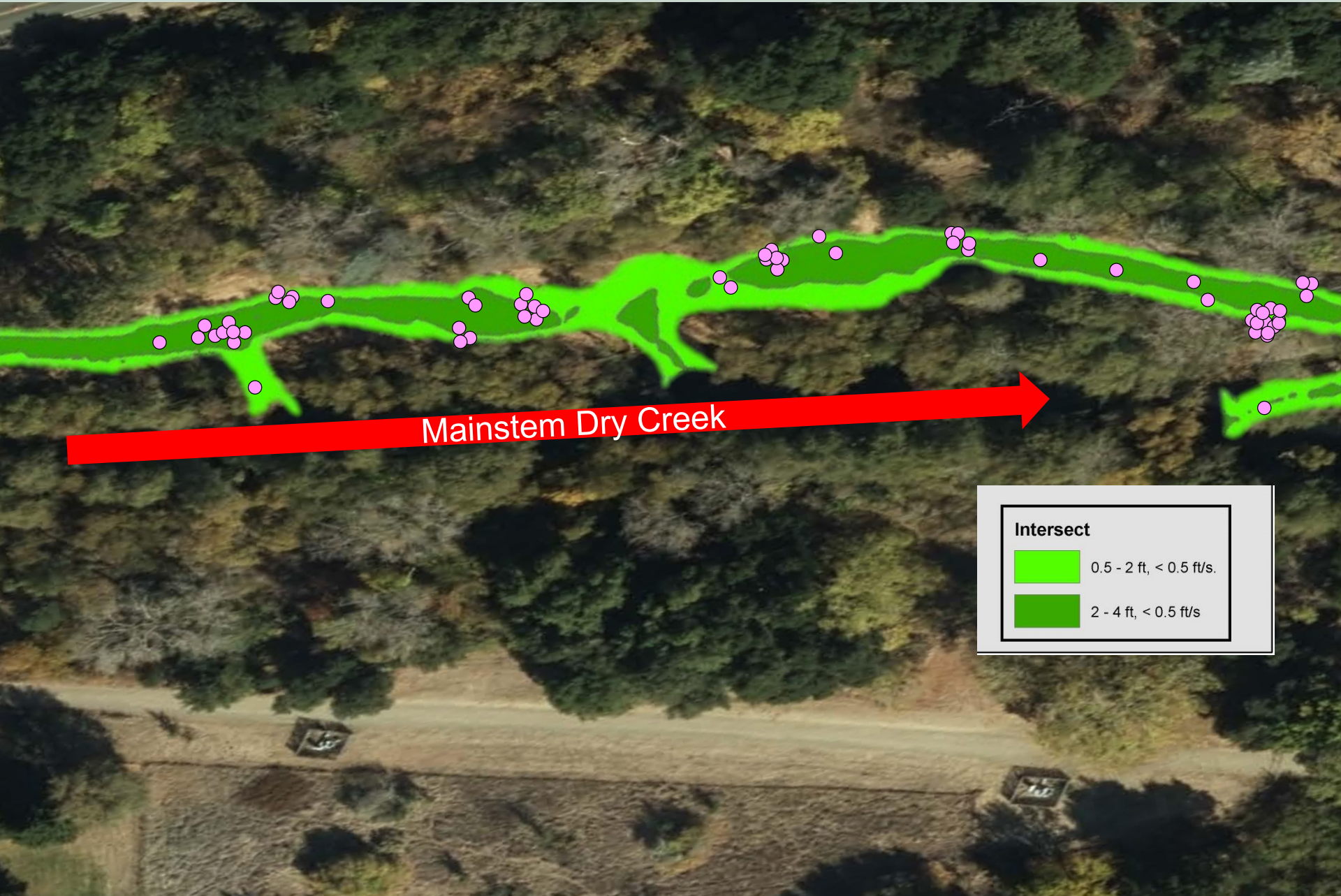
- Reach-scale abundance for juveniles
- Watershed relative abundance for smolts over time (i.e. trends)
- Summer habitat use
- Winter habitat use

Secondary metrics

- Growth
- Survival
- Community indices (i.e. invertebrates

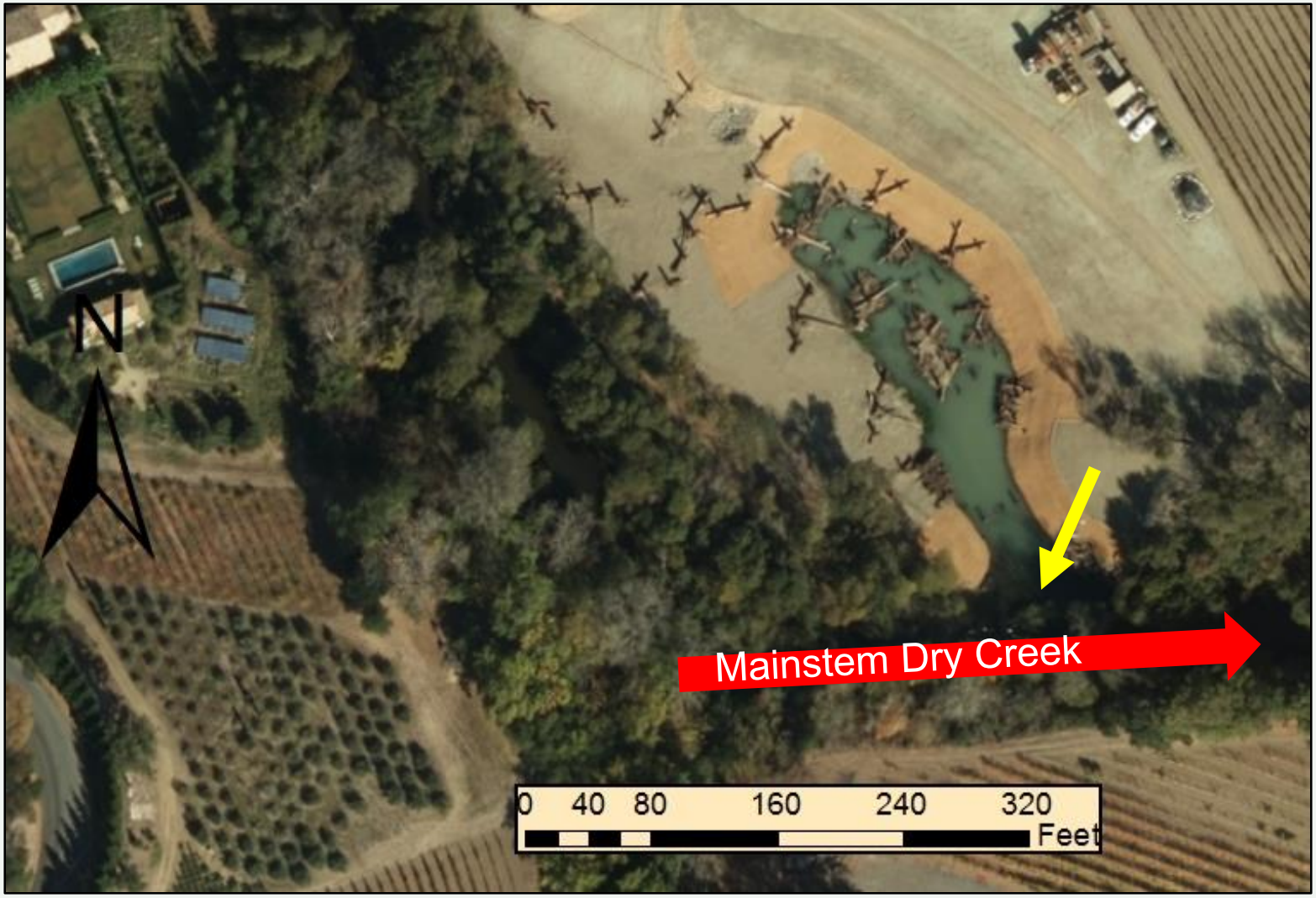

Warm Springs
Reach 15 *(side channel)*
Mouth

Habitat Use Summer



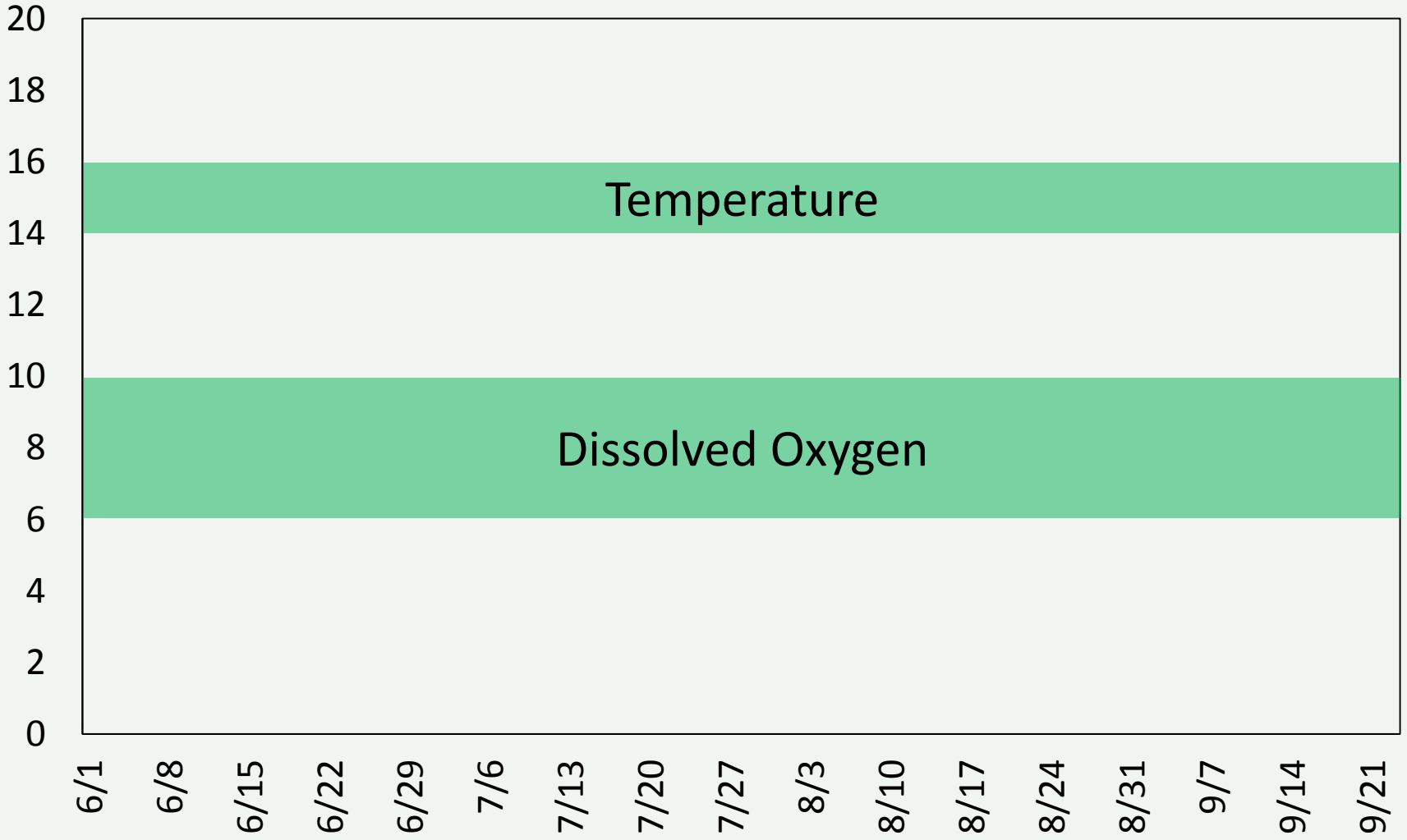

Warm Springs
Reach 15 *(side channel)*
Farrow *(backwater)*
Mouth

Farrow Backwater

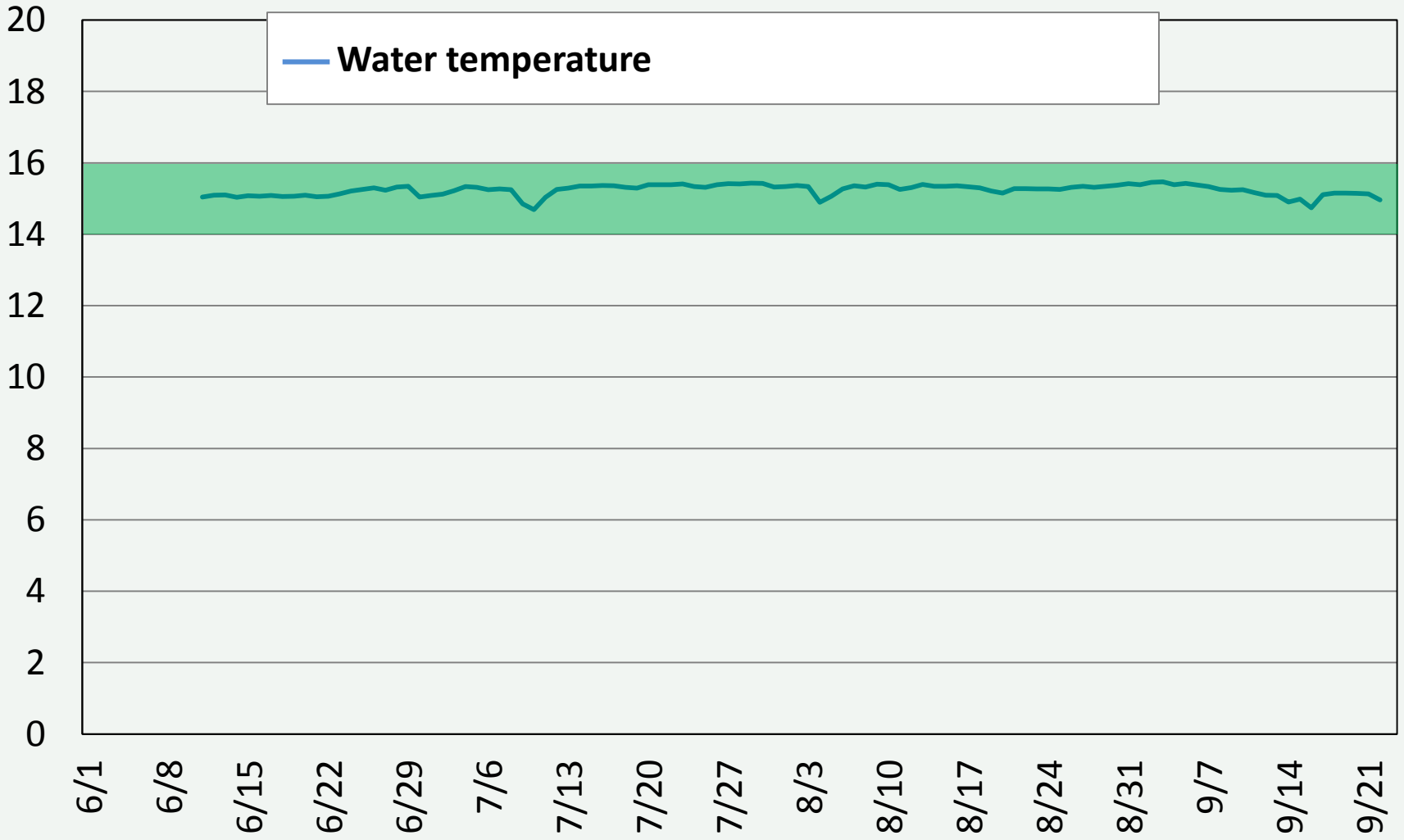


Farrow Backwater

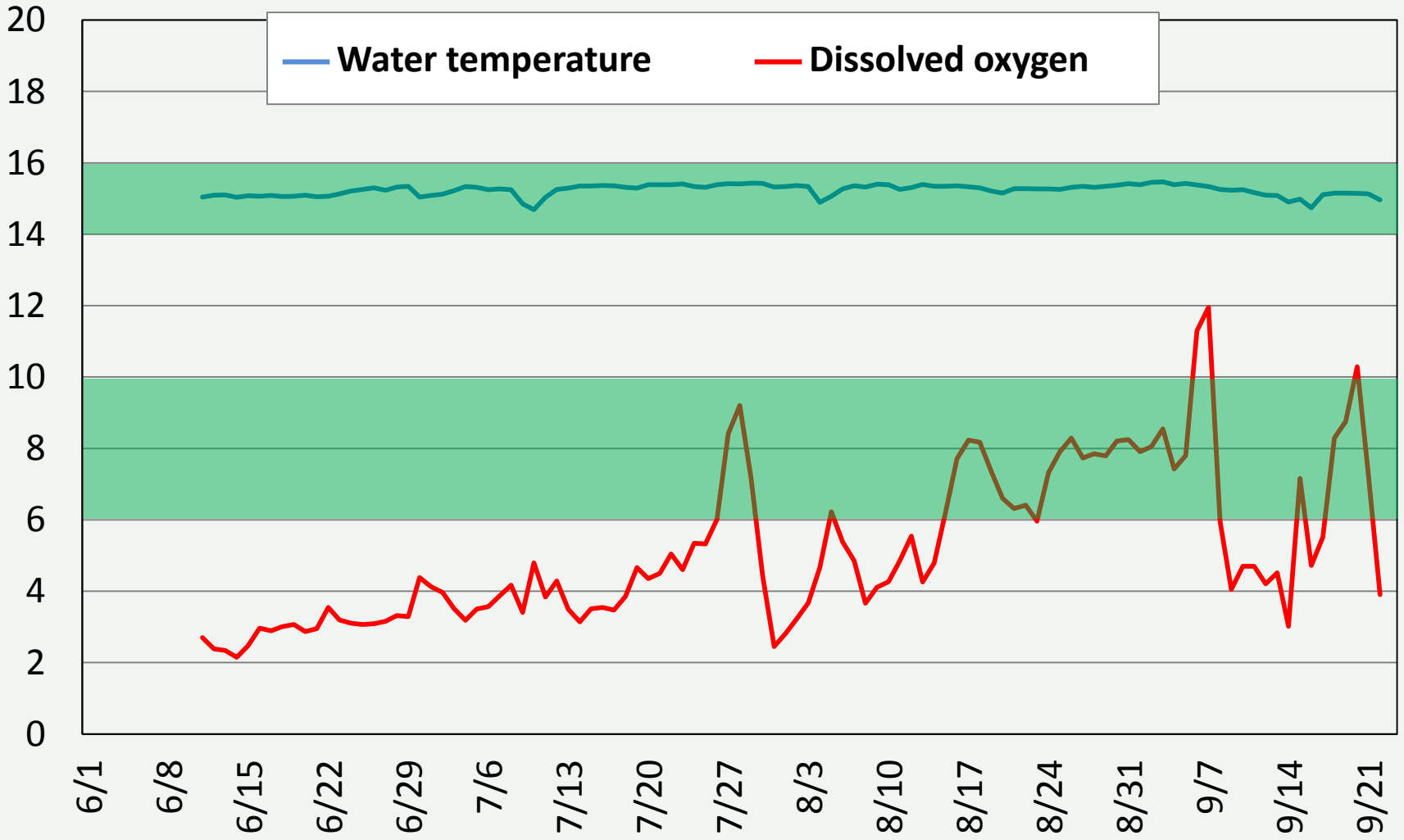
Water Quality - *Farrow Backwater*

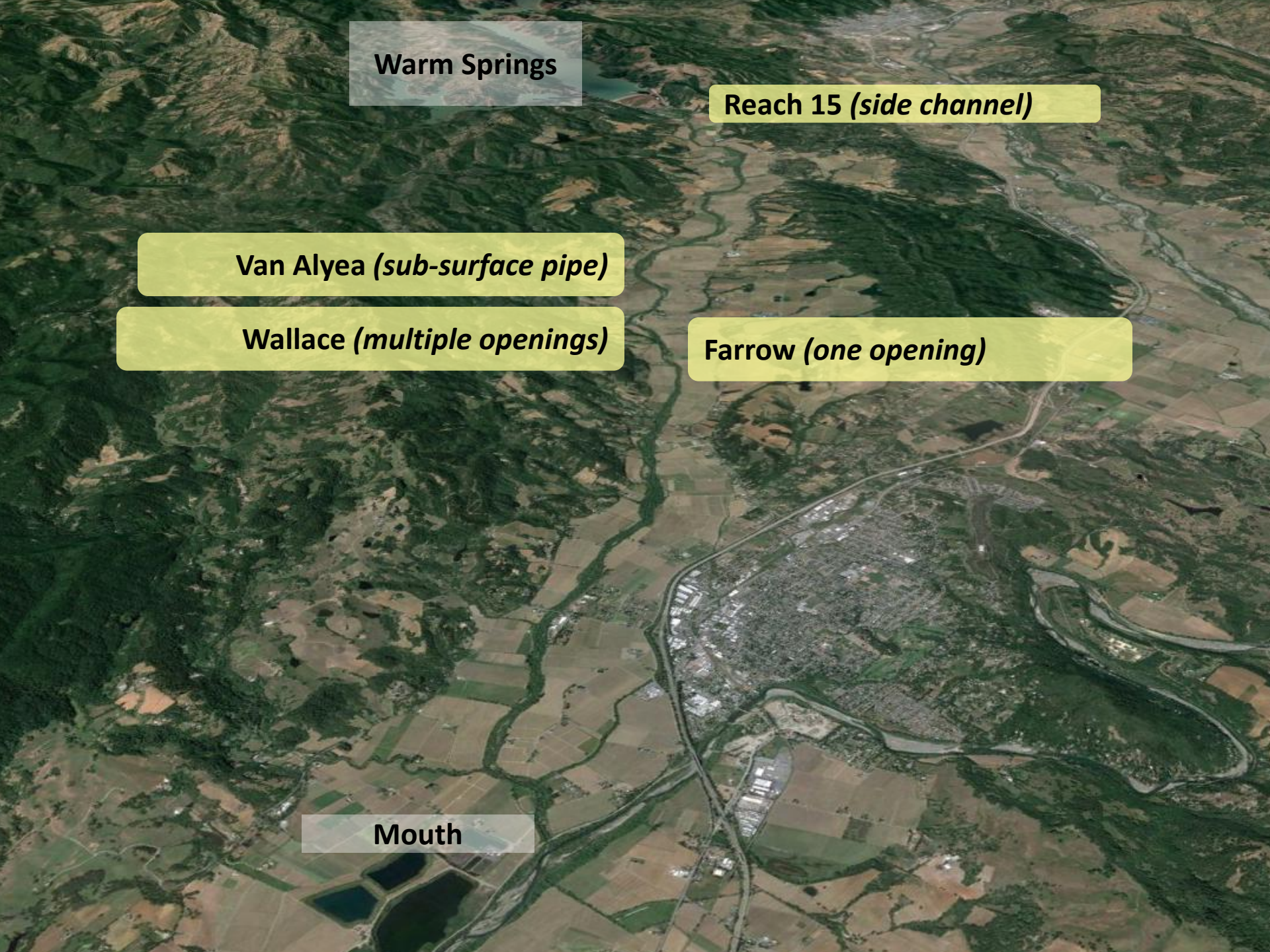


Water Quality - *Farrow Backwater*

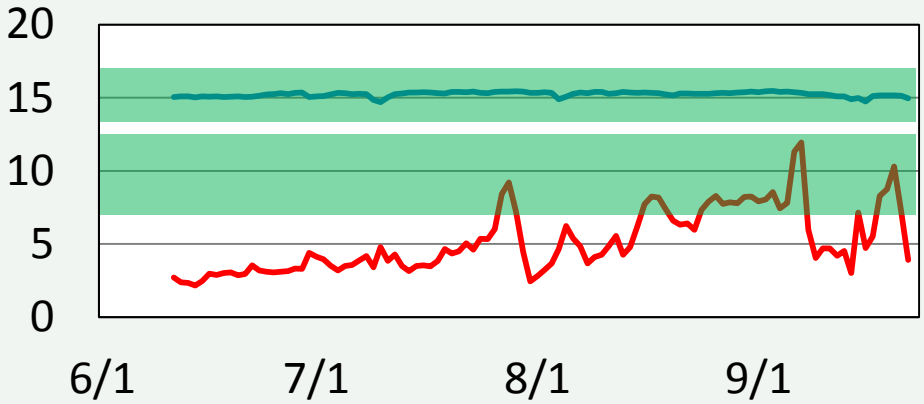


Water Quality - *Farrow Backwater*




Warm Springs
Reach 15 *(side channel)*
Van Alyea *(sub-surface pipe)*
Wallace *(multiple openings)*
Farrow *(one opening)*
Mouth

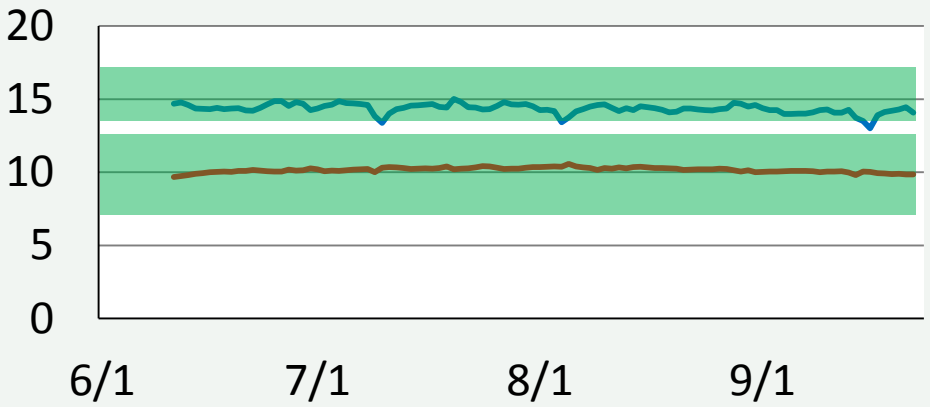
No connection (Farrow)



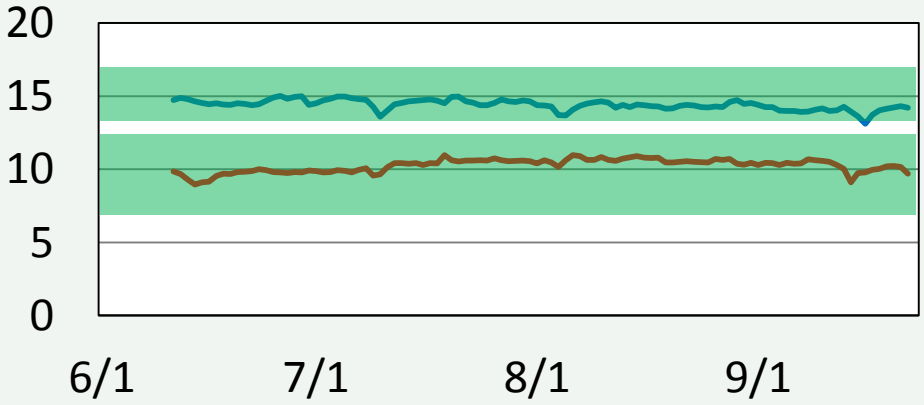
Temp-erature

Dissolved Oxygen

Side connections (Wallace)

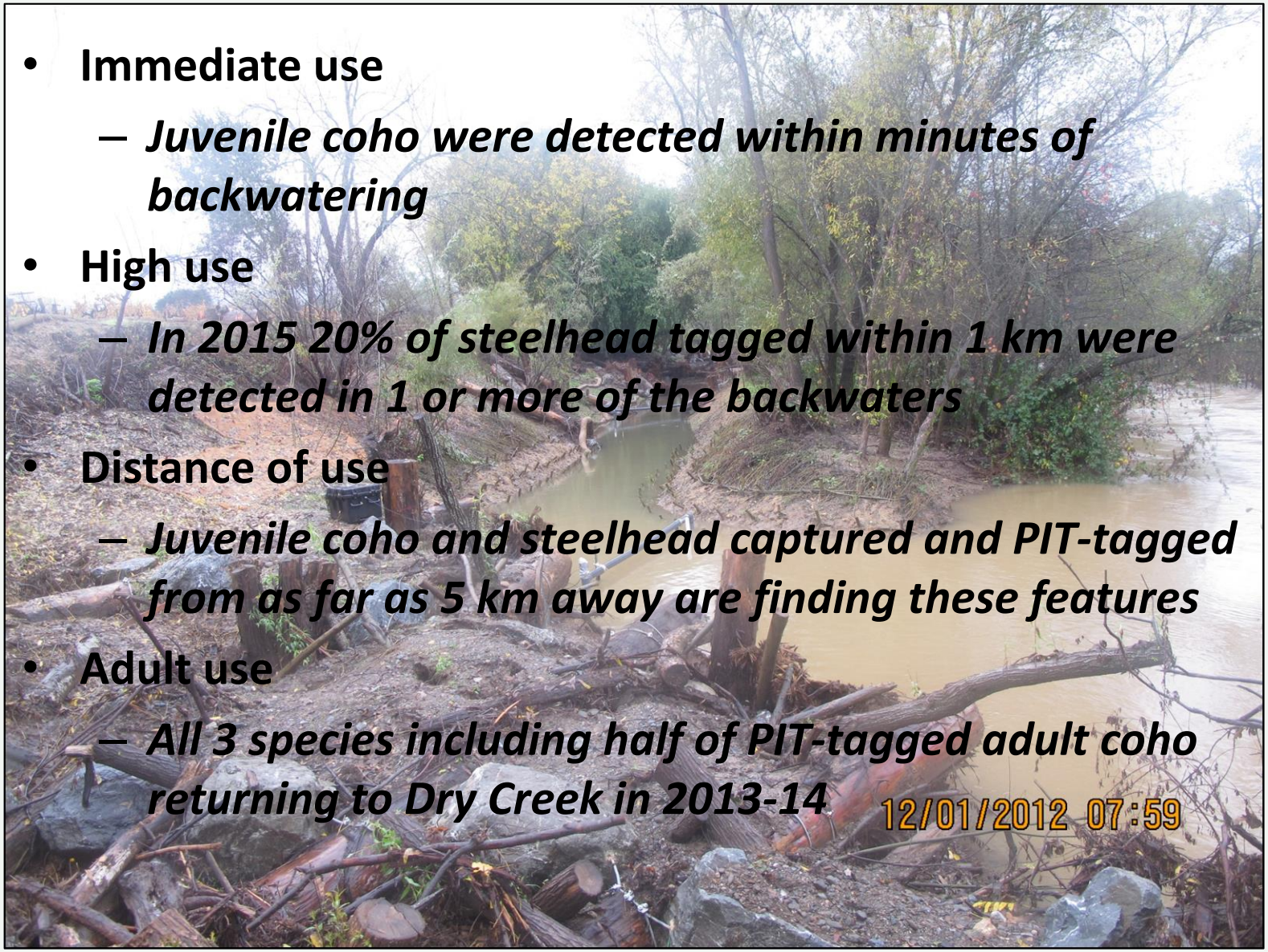


Pipe (Van Alyea)



Habitat Use - *Winter*

Habitat Use - *Winter*



- **Immediate use**
  - ***Juvenile coho were detected within minutes of backwatering***
- **High use**
  - ***In 2015 20% of steelhead tagged within 1 km were detected in 1 or more of the backwaters***
- **Distance of use**
  - ***Juvenile coho and steelhead captured and PIT-tagged from as far as 5 km away are finding these features***
- **Adult use**
  - ***All 3 species including half of PIT-tagged adult coho returning to Dry Creek in 2013-14***

Dry Creek Habitat Enhancement Project, Status of Miles 2-3

Greg Guensch, P.E.

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David Cuneo

Principal Environmental Specialist

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SONOMA COUNTY WATER AGENCY

DRY CREEK DEMONSTRATION PROJECT REACHES AND TIMELINE

COMPLETED AND IN-DESIGN PROJECTS, 2015

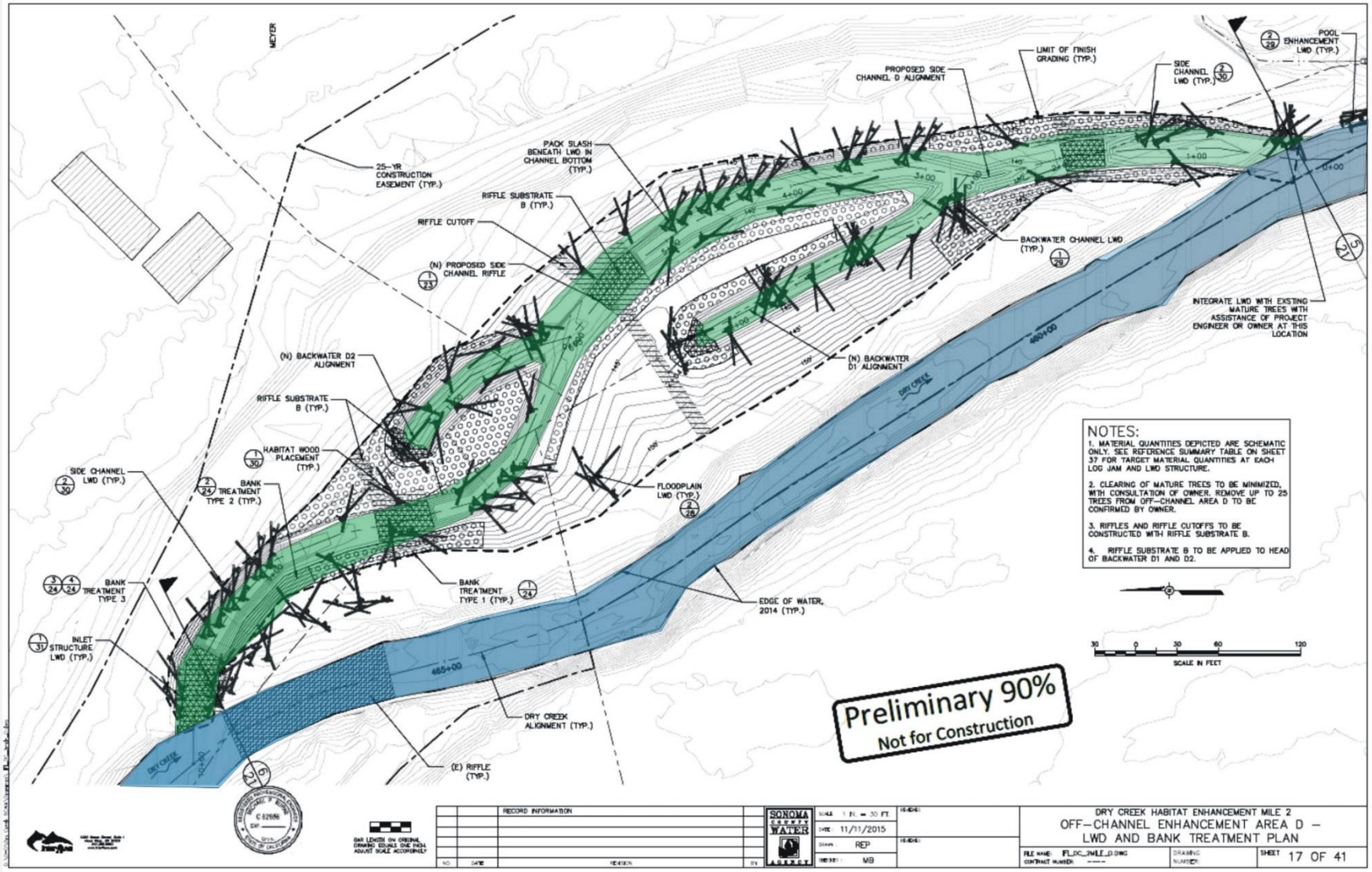
Complete design phase, permitting, landowner agreements, begin construction	**Milestone 1** 1 mile of habitat in Dry Creek completed and work on miles 2 & 3 begins	**Milestone 2** Complete Enhancement of miles 2 & 3	**Decision Point** Evaluate success of the enhancement projects	**Milestone 3** Enhance 3 additional miles of habitat in Dry Creek for a total of 6 miles
2012	**2014**	**2017**	**2018**	**2020**

SONOMA COUNTY WATER AGENCY

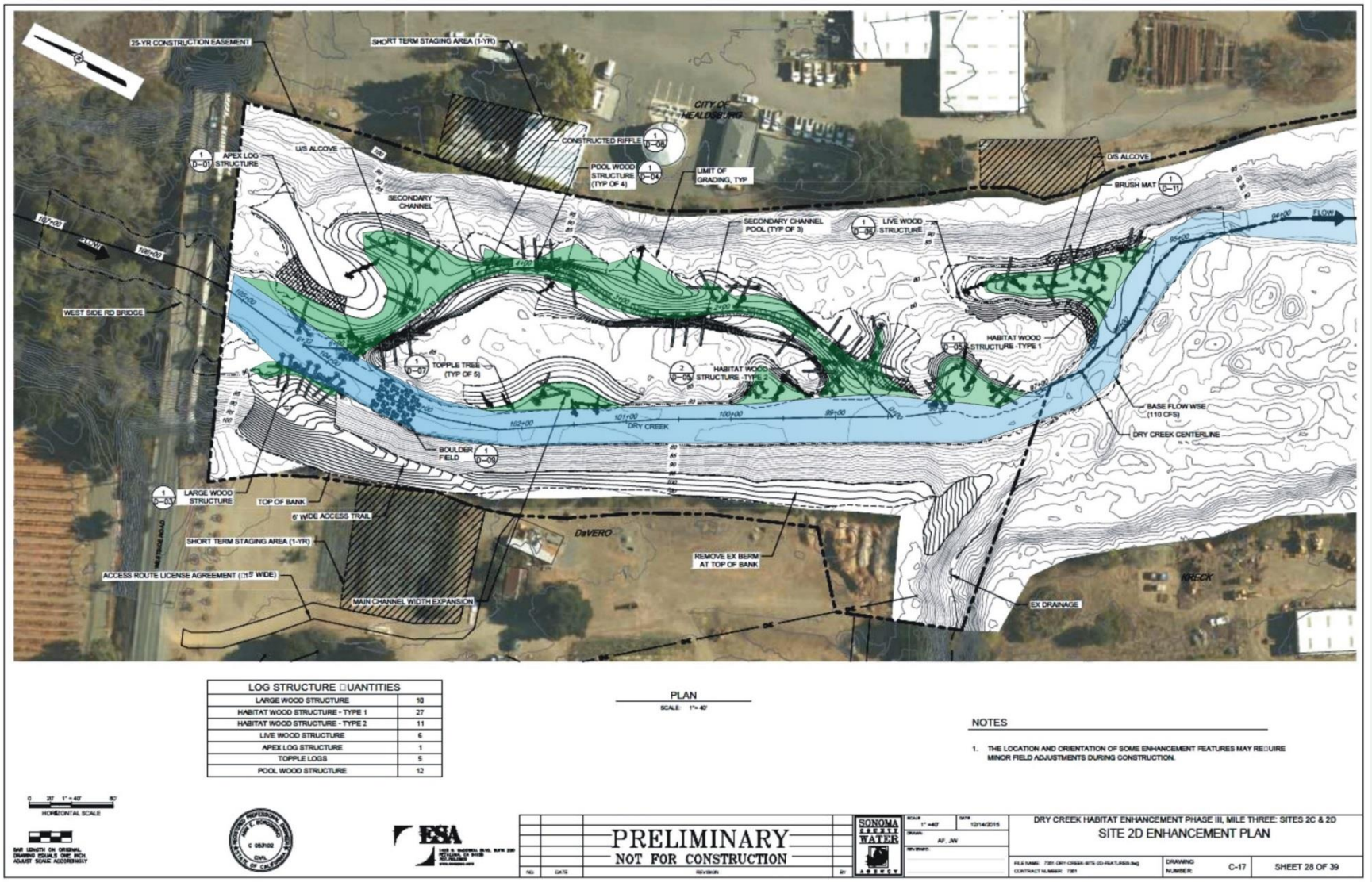
Mile 2-3 Project Status

- Final EIR Certified November 17, 2015
- Continuing with Project Design Development
- Coordination with Landowners
- Applying for Permits from Regulatory Agencies
  - CDFW, Army Corps of Engineers, Regional Board
- Construction beginning Summer 2016

Mile 2-3 Design Concepts



Mile 2-3 Design Concepts



LOG STRUCTURE QUANTITIES	
LARGE WOOD STRUCTURE	10
HABITAT WOOD STRUCTURE - TYPE 1	27
HABITAT WOOD STRUCTURE - TYPE 2	11
LIVE WOOD STRUCTURE	6
APEX LOG STRUCTURE	1
TOPPLE LOGS	5
POOL WOOD STRUCTURE	12

PLAN

SCALE: 1" = 40'

NOTES

1. THE LOCATION AND ORIENTATION OF SOME ENHANCEMENT FEATURES MAY REQUIRE MINOR FIELD ADJUSTMENTS DURING CONSTRUCTION.

HORIZONTAL SCALE

BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY

PRELIMINARY
NOT FOR CONSTRUCTION

SONOMA COUNTY WATER AGENCY

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D ENHANCEMENT PLAN

DRAWING NUMBER: C-17

SHEET 28 OF 39

Question & Answer Session

SONOMA COUNTY WATER AGENCY

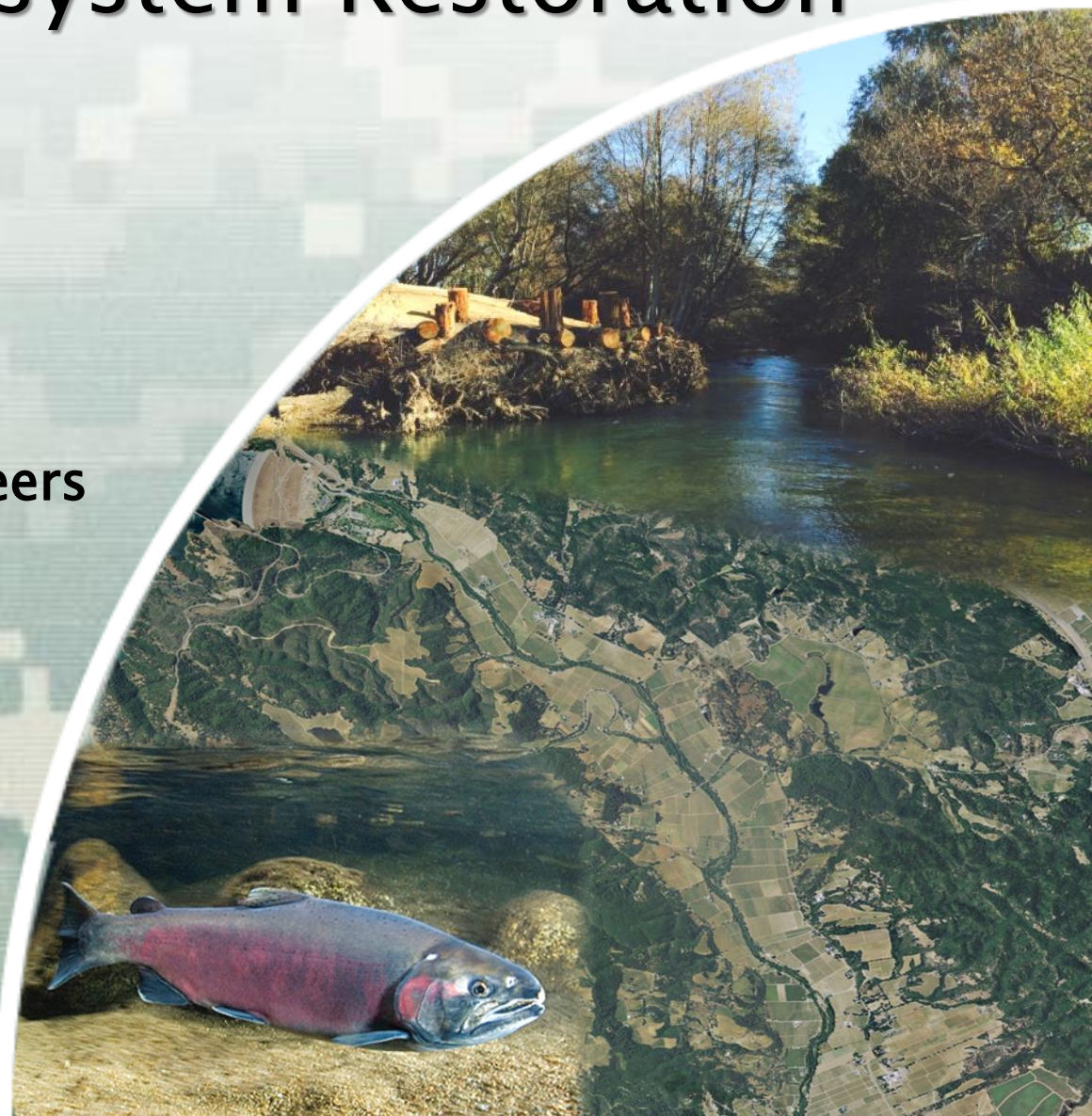
U.S. Army Corps of Engineers (Corps) Dry Creek Ecosystem Restoration Projects

14 January, 2016

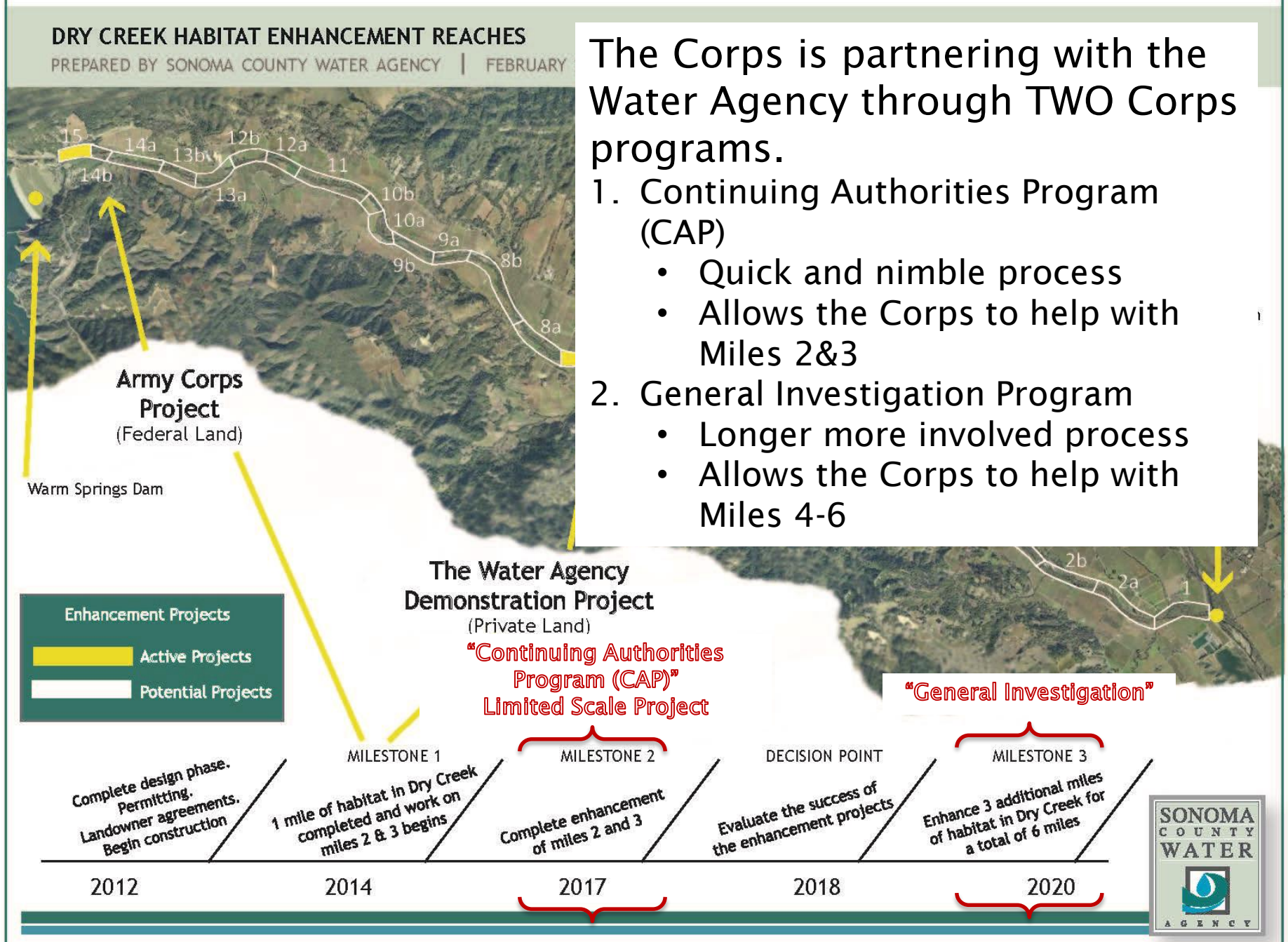
U.S. Army Corps of Engineers

San Francisco District

Kelly Janes, Lead Planner



US Army Corps of Engineers
BUILDING STRONG®
San Francisco District



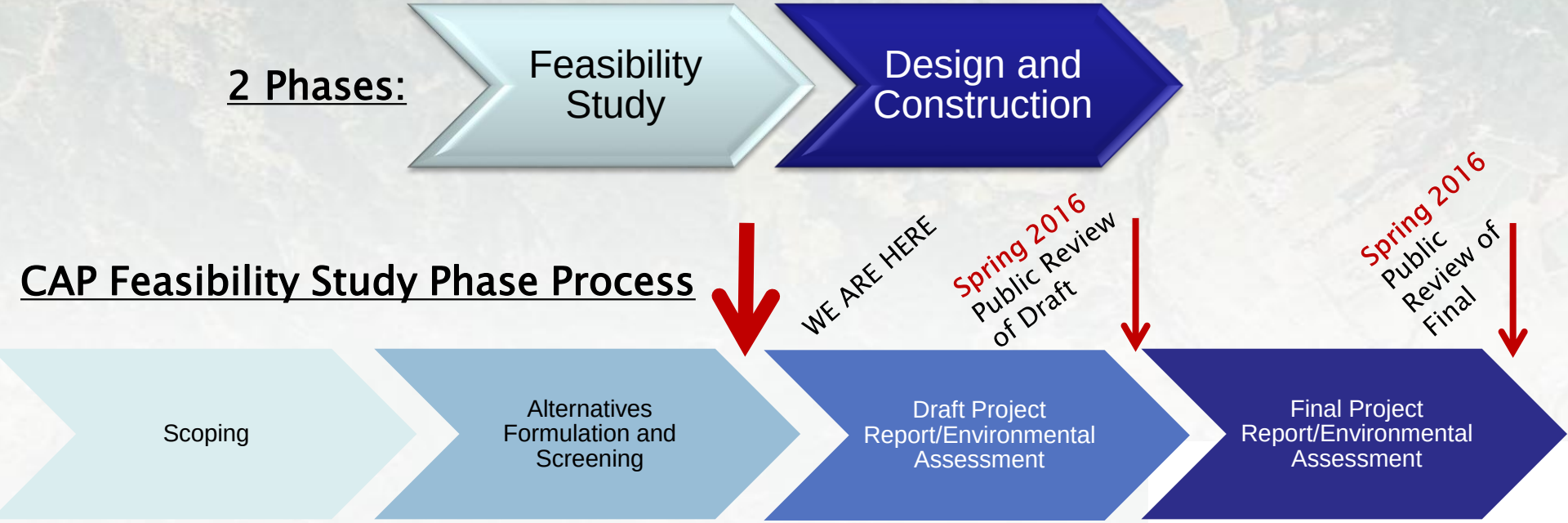
The Corps is partnering with the Water Agency through TWO Corps programs.

1. Continuing Authorities Program (CAP)
   - Quick and nimble process
   - Allows the Corps to help with Miles 2&3
2. General Investigation Program
   - Longer more involved process
   - Allows the Corps to help with Miles 4-6

Corps' Continuing Authorities Program (CAP)

Allows the Corps to perform ecosystem restoration in areas associated with an existing Corps projects (ex. Warms Springs Dam)

- Limited scope and complexity = shorter, more nimble process
- Limits on Federal funding.



Corps General Investigation Program

Allows the Corps to perform ecosystem restoration.

- Without limits on funding and scope as long as the proposed plan is cost effective.
- Longer, more complex process

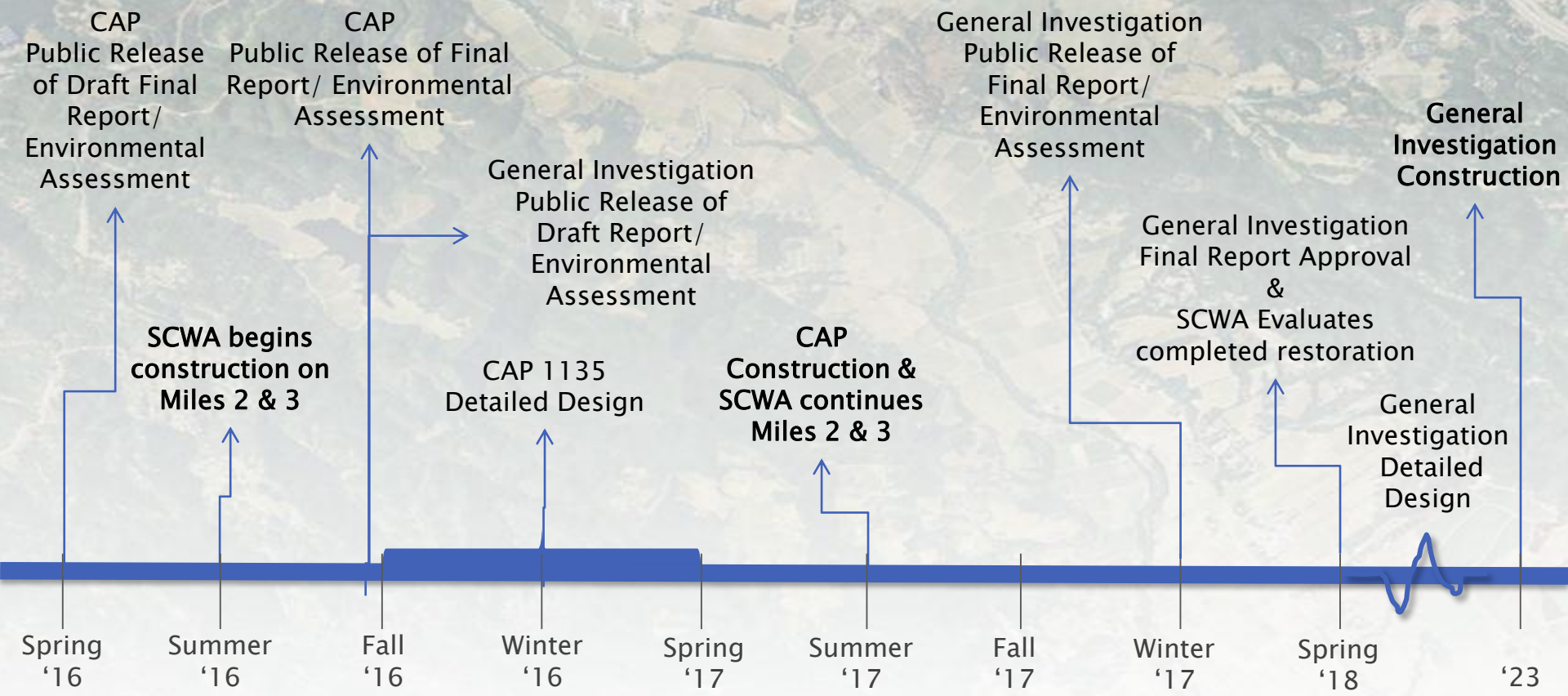
3 Phases:

Feasibility Study Phase Process

U.S. Army Corps of Engineers

BUILDING STRONG®

Dry Creek Restoration Timeline



U.S. Army Corps of Engineers

BUILDING STRONG®

Corps Involvement Take Away

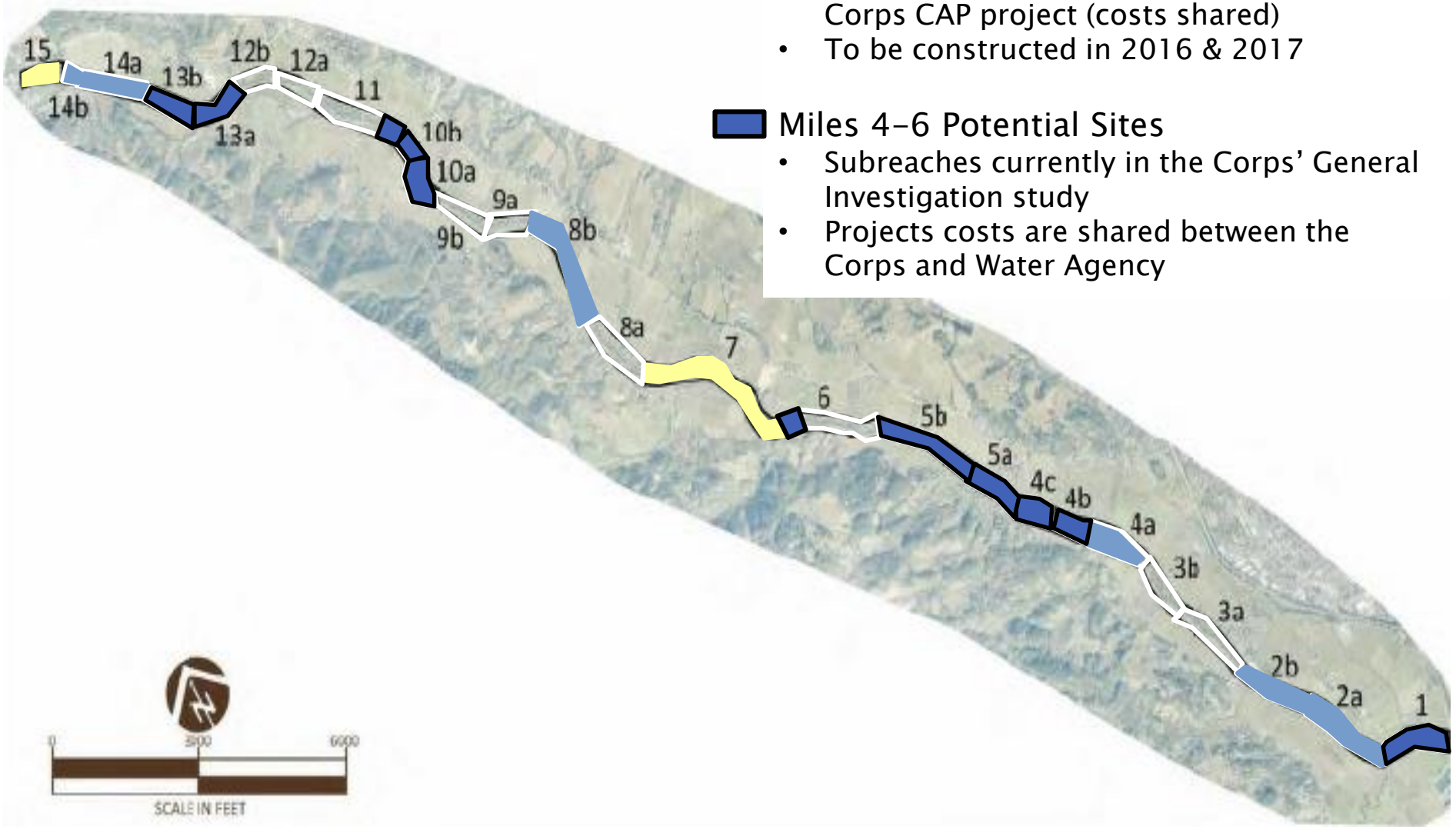
The Corps is partnering with the Water Agency through TWO Corps restoration programs.

- Both are contributing funding as well as planning, design, and construction expertise.
  - The CAP study will contribute to Miles 2&3.
  - The General Investigation study will contribute to Miles 4-6.

The Corps requires a complex planning process that is running parallel to the Water Agency's planning efforts.

- No duplication of effort - Corps process uses information already gathered.
- The Water Agency and Corps will collaborate on the construction of habitat projects
- The Water Agency will continue to take the lead on all property owner negotiations and easements
- The Water Agency is responsible for long term maintenance

Dry Creek Projects Overview



Constructed

Miles 2 & 3 Potential Sites

- Includes Water Agency funded project & Corps CAP project (costs shared)
- To be constructed in 2016 & 2017

Miles 4-6 Potential Sites

- Subreaches currently in the Corps' General Investigation study
- Projects costs are shared between the Corps and Water Agency

Future Project Phases: Miles 4-6

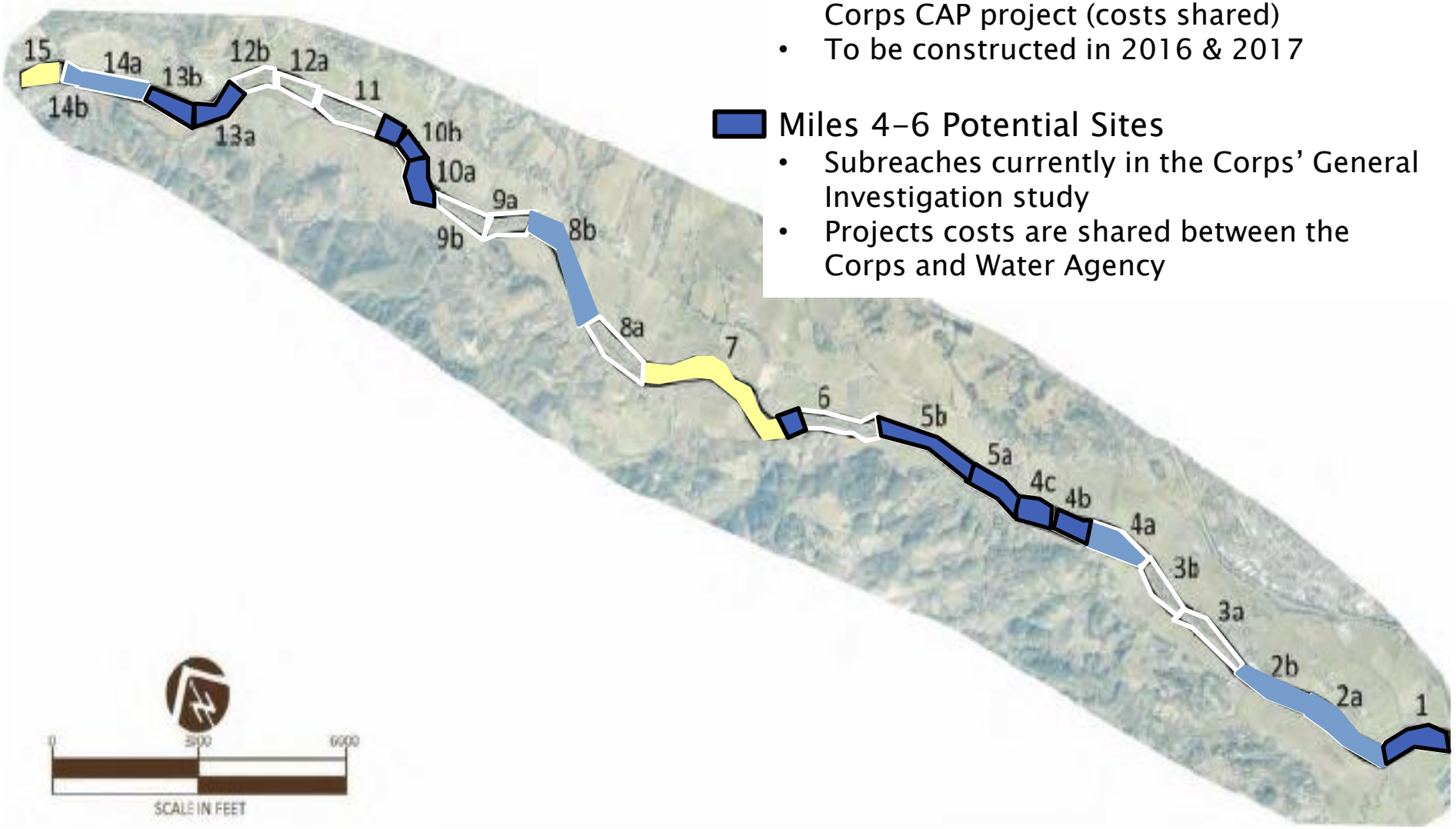
David Manning

Environmental Resources Manager

David.Manning@scwa.ca.gov

SONOMA COUNTY WATER AGENCY

Dry Creek Projects Overview



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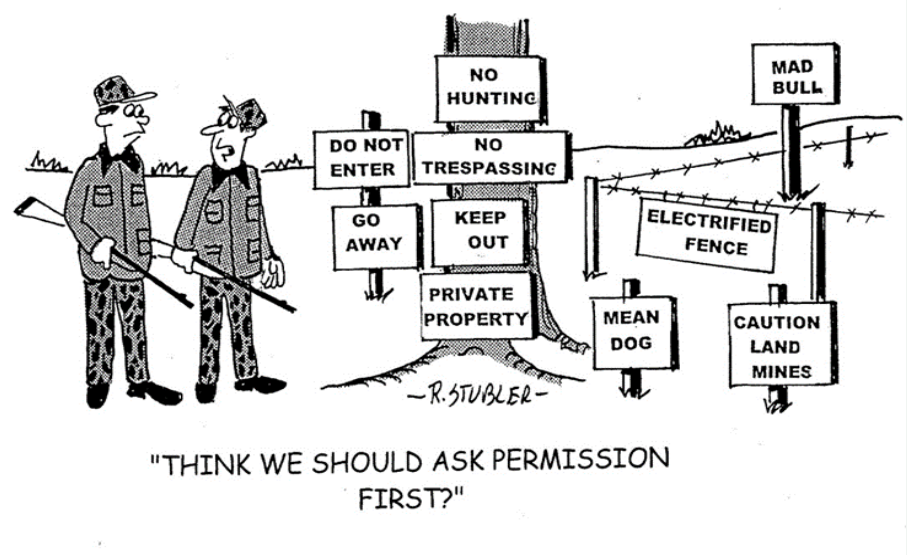
Miles 4-6 Potential Sites

- Subreaches currently in the Corps' General Investigation study
- Projects costs are shared between the Corps and Water Agency

The Right of Way Acquisition Process

- Dry Creek runs over private property
- Your Permission is needed
- 175 parcels along Dry Creek
- 90 property owners participating in project
- We need your help to be successful



"THINK WE SHOULD ASK PERMISSION FIRST?"

Daniel Mason
Right of Way Agent
Daniel.Mason@scwa.ca.gov

SONOMA COUNTY WATER AGENCY

The Right of Way Acquisition Process

First Phase:

Initial Support – Support the Project, participate with your neighbors in a Project location for Studies; Site Surveying, Planning and Design of habitat features:

- Permission to Enter (PTE) Agreement
- No Commitment for construction on property
- 48 hour notification before access
- Change your mind?
- Your permission is revocable.

The Right of Way Acquisition Process

Second Phase:

- Acquisition of Right of Way
- Real Property needs to build Project
- We acquire an easement for construction, and long term Maintenance & Monitoring
- Temporary construction agreements for temporary staging areas to support construction

Questions?

Please call or email: 547-1912 or
Daniel.Mason@scwa.ca.gov

A Salmon Safe Harbor Agreement for Dry Creek

A mechanism to provide assurances to non-federal landowners who voluntarily enhance habitat

Bob Coey and Dan Wilson – NMFS West Coast Region

January 2016

What is the Dry Creek Valley Programmatic Safe Harbor Agreement?

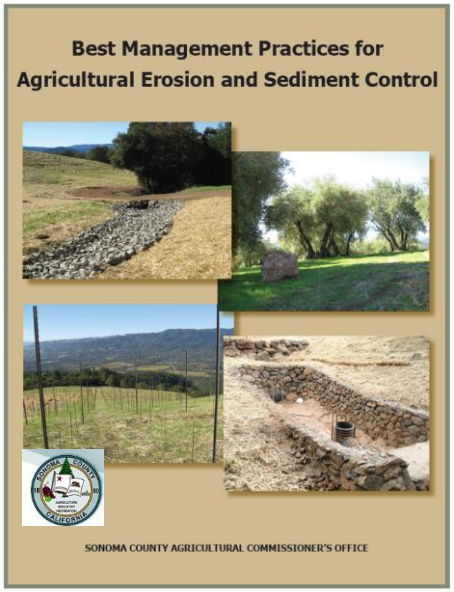
- A 35 year long **voluntary agreement** between NMFS and Sonoma County Water Agency
- Identifies M**anagement Activities** that provide a **Net Conservation Benefit** for listed salmon and steelhead
- Management Activities: providing access for construction of **Habitat Enhancement Projects (HEP's)** and monitoring of HEP's, habitat and fish
- SCWA will hold an Endangered Species Act (ESA) Permit to enroll landowners in voluntary **Cooperative Agreements**
- NMFS will provide cooperators **ESA protection for Routine Viticulture Activities** within their enrolled property, as described by a **Farm Plan** for up to 35 years

Elements of a Cooperative Agreement

- **Routine Viticulture Activities**
  - Including: cultivation, replanting, irrigation including frost protection, harvesting, transportation, erosion control, removal of trash and invasive plants and BMP's
- **NMFS Responsibilities**
  - Provide Safe Harbor Assurances
- **SCWA Responsibilities**
  - Construct and manage the HEPs
  - Monitor HEPs, fish and habitat conditions on enrolled properties
- **Landowner Responsibilities**
  - Allow access to SCWA for the management of HEPs
  - Avoid undertaking activities that degrade the HEP's
  - Follow BMPs according to their Farm Plan

Farm Plans and BMP's for Viticulture

CALIFORNIA
SUSTAINABLE WINEGROWING
ALLIANCE



FARMING

Encouraging growing practices that protect the endangered coho salmon and steelhead trout. Because premium food and wine comes from a pristine environment.

LandSmart
Productive lands. Thriving streams.

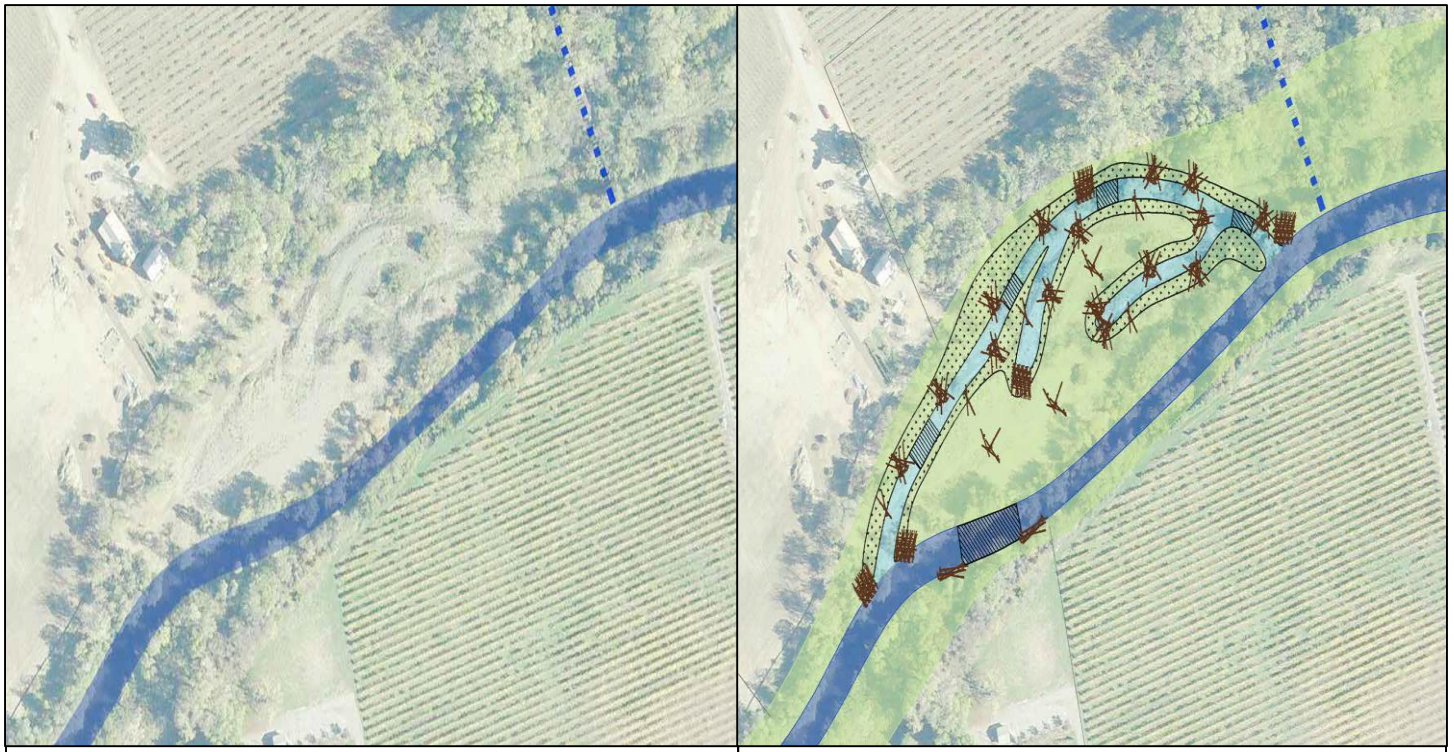
SIP CERTIFIED
Sustainability in Practice

NMFS Safe Harbor Assurances

As long as the HEP's are maintained, Cooperators are assured:

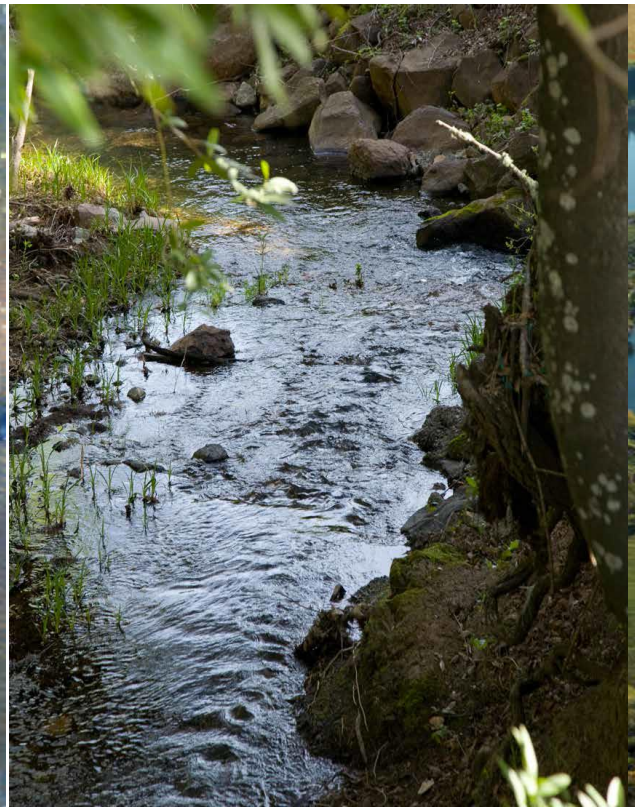
- ESA protections for Viticulture Activities on each enrolled property
- No new restrictions – No Surprises resulting from the ESA
- A voluntary agreement allowing the landowner to opt out at any time
- The ability to return to an *Elevated* Baseline conditions on enrolled property at the end of the safe harbor agreement period

Existing vs. Elevated Baseline Condition



Existing Conditions	Elevated Baseline

What's in it for NMFS?



What's in it for landowners?

Further Questions?

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Final Questions & Answers

SONOMA COUNTY WATER AGENCY